GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: August 19, 2004, 03:11:30 ; Search time 7823 Seconds
(without alignments)
11418.892 Million cell updates/sec

Title: US-09-930-591-1
Perfect score: 2061
Sequence: 1 atggcgcctatcacggccta.....atgaaatggaagagtgctga 2061

Scoring table: OLIGO_NUC
Gapop 60.0 , Gapext 60.0

Searched: 3470272 seqs, 21671516995 residues

Word size : 35 or more

Total number of hits satisfying chosen parameters: 311

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Listing first 1000 summaries

Database : GenEmbl:*
1: gb_ba:*
2: gb_htg:*
3: gb_in:*
4: gb_om:*
5: gb_ov:*
6: gb_pat:*
7: gb_ph:*
8: gb_pl:*
9: gb_pr:*
10: gb_ro:*
11: gb_sts:*
12: gb_sy:*
13: gb_un:*
14: gb_vi:*
15: em_ba:*
16: em_fun:*
17: em_hum:*
18: em_in:*
19: em_mu:*
20: em_om:*
21: em_or:*
22: em_ov:*
23: em_pat:*
24: em_ph:*
25: em_pl:*
26: em_ro:*
27: em_sts:*
28: em_un:*
29: em_vi:*
30: em_htg_hum:*
31: em_htg_inv:*
32: em_htg_other:*
33: em_htg_mus:*
34: em_htg_pln:*
35: em_htg_rod:*
36: em_htg_mam:*
37: em_htg_vrt:*
38: em_sy:*
39: em_htgo_hum:*
40: em_htgo_mus:*
41: em_htgo_other:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Result No.	Score	% Query Match	Length	DB	ID	Description
	1	2061	100.0	2061	6	AX441176	AX441176 Sequence
	2	2061	100.0	2061	6	AX467113	AX467113 Sequence
	3	92	4.5	9610	14	HEC278830	AJ278830 Hepatitis
	4	76	3.7	9426	14	AF511949	AF511949 Hepatitis
	5	62	3.0	943	6	A22779	A22779 non-structu
	6	62	3.0	943	6	AR031209	AR031209 Sequence
	7	62	3.0	943	6	AR145025	AR145025 Sequence
	8	62	3.0	943	14	HPCNS3NS4	D10664 Hepatitis C
	9	62	3.0	9365	14	AF290978	AF290978 Hepatitis
	10	62	3.0	9395	14	AF511950	AF511950 Hepatitis
	11	61	3.0	957	6	BD226202	BD226202 Improved
	12	59	2.9	241	14	HPCNS10CLN	M94401 Hepatitis C
	13	59	2.9	241	14	HPCNS11CLN	M94400 Hepatitis C
	14	59	2.9	550	14	HCVNSTP	X71406 Hepatitis C
	15	59	2.9	1477	14	HPCNS34	M60220 Hepatitis C
	16	58	2.8	382	6	AR124773	AR124773 Sequence
	17	58	2.8	382	6	AR353560	AR353560 Sequence
	18	58	2.8	1414	6	AR124772	AR124772 Sequence
	19	58	2.8	1414	6	AR353559	AR353559 Sequence
	20	58	2.8	1420	6	AR124774	AR124774 Sequence
	21	58	2.8	1420	6	AR353561	AR353561 Sequence
	22	57	2.8	162	14	HPCHCV35	M55151 Hepatitis C
	23	57	2.8	223	14	HPCNS17CLN	M94451 Hepatitis C
	24	57	2.8	229	14	HPCNS15CLN	M94449 Hepatitis C
	25	57	2.8	241	14	HPCNSCLN5	M94469 Hepatitis C
	26	56	2.7	281	6	I32190	I32190 Sequence 75
	27	56	2.7	281	6	I34281	I34281 Sequence 75
	28	56	2.7	281	6	I82486	I82486 Sequence 75
	29	56	2.7	281	6	BD140411	BD140411 Hepatitis
	30	56	2.7	283	6	AR118676	AR118676 Sequence
	31	56	2.7	368	6	I32188	I32188 Sequence 71
	32	56	2.7	368	6	I34279	I34279 Sequence 71
	33	56	2.7	368	6	I82484	I82484 Sequence 71
	34	56	2.7	368	6	BD140409	BD140409 Hepatitis
	35	56	2.7	543	14	AF369231	AF369231 Hepatitis
	36	56	2.7	1284	14	HPCNS3PROB	M62386 Hepatitis C
	37	56	2.7	2058	6	AR404933	AR404933 Sequence
	38	56	2.7	2058	6	AR408362	AR408362 Sequence
	39	56	2.7	2058	6	AX395309	AX395309 Sequence
	40	56	2.7	2058	6	AX454818	AX454818 Sequence
	41	56	2.7	2064	6	I32187	I32187 Sequence 69
	42	56	2.7	2064	6	I34278	I34278 Sequence 69
	43	56	2.7	2064	6	I82483	I82483 Sequence 69
	44	56	2.7	2064	6	BD140408	BD140408 Hepatitis
	45	56	2.7	2283	6	BD140416	BD140416 Hepatitis
	46	56	2.7	2523	6	I32195	I32195 Sequence 85
	47	56	2.7	2523	6	I34286	I34286 Sequence 85
	48	56	2.7	2523	6	I82491	I82491 Sequence 85
	49	56	2.7	5360	6	AR118686	AR118686 Sequence
	50	56	2.7	5360	6	I06434	I06434 Sequence 48
	51	56	2.7	5360	6	I09328	I09328 Sequence 8
	52	56	2.7	6299	6	AX164584	AX164584 Sequence
	53	56	2.7	6785	6	AR118692	AR118692 Sequence
	54	56	2.7	6785	6	I06440	I06440 Sequence 54
	55	56	2.7	6785	6	I09329	I09329 Sequence 10
	56	56	2.7	7310	6	AR118696	AR118696 Sequence
	57	56	2.7	7310	6	I09331	I09331 Sequence 15
	58	56	2.7	7310	14	HPCPOLYP	M32084 Hepatitis C
	59	56	2.7	8316	6	AR118703	AR118703 Sequence
	60	56	2.7	8987	6	AR118728	AR118728 Sequence
	61	56	2.7	9185	6	AR118722	AR118722 Sequence
c	62	56	2.7	9185	6	AR118723	AR118723 Sequence
	63	56	2.7	9185	6	I08294	I08294 Sequence 1
	64	56	2.7	9185	6	BD091382	BD091382 HCV culti
	65	56	2.7	9379	6	AR118747	AR118747 Sequence

66	56	2.7	9379	6	AR166930	AR166930 Sequence
67	56	2.7	9379	6	AR301300	AR301300 Sequence
68	56	2.7	9401	6	AR176483	AR176483 Sequence
69	56	2.7	9401	6	E66593	E66593 Hepatitis C
70	56	2.7	9401	6	I71894	I71894 Sequence 9
71	56	2.7	9401	6	I81885	I81885 Sequence 9
72	56	2.7	9401	6	BD080334	BD080334 Hepatitis
73	56	2.7	9401	14	HPCPLYPRE	M62321 Hepatitis C
74	56	2.7	9609	12	AF387805	AF387805 Synthetic
75	56	2.7	9609	12	AF387808	AF387808 Synthetic
76	56	2.7	9646	12	AF387806	AF387806 Synthetic
77	56	2.7	9693	12	AF387807	AF387807 Synthetic
78	55	2.7	543	14	AF369219	AF369219 Hepatitis
79	53	2.6	414	14	HCU14261	U14261 Hepatitis C
80	53	2.6	475	6	AX361030	AX361030 Sequence
81	53	2.6	475	6	AX377696	AX377696 Sequence
82	53	2.6	583	6	AX361032	AX361032 Sequence
83	53	2.6	583	6	AX377698	AX377698 Sequence
84	53	2.6	585	14	S68681	S68681 putative no
85	53	2.6	790	6	AX361031	AX361031 Sequence
86	53	2.6	790	6	AX377697	AX377697 Sequence
87	53	2.6	836	6	AX361029	AX361029 Sequence
88	53	2.6	836	6	AX377695	AX377695 Sequence
89	53	2.6	1284	14	HPCNS3PROA	M62385 Hepatitis C
90	53	2.6	9416	6	AX441173	AX441173 Sequence
91	53	2.6	9416	14	HPCCGAA	M67463 Hepatitis C
92	53	2.6	9518	6	AX100563	AX100563 Sequence
93	53	2.6	9599	6	AR119831	AR119831 Sequence
94	53	2.6	9599	6	AR119833	AR119833 Sequence
95	53	2.6	9599	14	AF011751	AF011751 Hepatitis
96	53	2.6	9599	14	AF011752	AF011752 Hepatitis
97	53	2.6	9599	14	AF011753	AF011753 Hepatitis
98	53	2.6	9611	6	AX057088	AX057088 Sequence
99	53	2.6	9611	6	AX057090	AX057090 Sequence
100	53	2.6	9611	6	AX057092	AX057092 Sequence
101	53	2.6	9611	6	AX057094	AX057094 Sequence
102	53	2.6	9611	14	AF177037	AF177037 Hepatitis
103	53	2.6	9611	14	AF177038	AF177038 Hepatitis
104	53	2.6	9611	14	AF177039	AF177039 Hepatitis
105	53	2.6	9611	14	AF177040	AF177040 Hepatitis
106	53	2.6	9646	6	AR110828	AR110828 Sequence
107	53	2.6	9646	6	BD069982	BD069982 Functiona
108	53	2.6	9646	14	AF009606	AF009606 Hepatitis
109	53	2.6	12980	6	AR110831	AR110831 Sequence
110	53	2.6	12980	6	BD069985	BD069985 Functiona
111	52	2.5	885	6	A48835	A48835 Sequence 1
112	52	2.5	885	6	AR104893	AR104893 Sequence
113	52	2.5	885	6	AR163011	AR163011 Sequence
114	52	2.5	885	6	AR173561	AR173561 Sequence
115	52	2.5	885	6	AX774443	AX774443 Sequence
116	52	2.5	885	6	BD132062	BD132062 Recombina
117	50	2.4	337	6	AX360976	AX360976 Sequence
118	50	2.4	337	6	AX377642	AX377642 Sequence
119	50	2.4	373	6	AR230498	AR230498 Sequence
120	50	2.4	373	6	AR310193	AR310193 Sequence
121	50	2.4	373	6	AR350605	AR350605 Sequence
122	50	2.4	442	6	AX360964	AX360964 Sequence
123	50	2.4	442	6	AX377630	AX377630 Sequence
124	50	2.4	543	14	AF369214	AF369214 Hepatitis
125	50	2.4	543	14	AF369227	AF369227 Hepatitis
126	50	2.4	543	14	AF369230	AF369230 Hepatitis
127	50	2.4	543	14	AF369233	AF369233 Hepatitis
128	50	2.4	543	14	AF369235	AF369235 Hepatitis
129	50	2.4	543	14	AF369237	AF369237 Hepatitis
130	50	2.4	559	6	AX361034	AX361034 Sequence
131	50	2.4	559	6	AX377700	AX377700 Sequence
132	50	2.4	617	6	AX361033	AX361033 Sequence
133	50	2.4	617	6	AX377699	AX377699 Sequence
134	50	2.4	1251	6	AR124766	AR124766 Sequence
135	50	2.4	1251	6	AR353553	AR353553 Sequence
136	50	2.4	9424	14	AF511948	AF511948 Hepatitis
137	48	2.3	5211	6	BD270487	BD270487 Substitut
138	48	2.3	5211	6	AX044453	AX044453 Sequence
139	48	2.3	6935	14	HPCT2	D16435 Hepatitis C
140	48	2.3	9033	14	D89872	D89872 Hepatitis C
141	48	2.3	9379	14	AF207765	AF207765 Hepatitis
142	48	2.3	9427	14	HPCJRNA	D14484 Hepatitis C
143	48	2.3	9434	14	HPCJTB	D11355 Hepatitis C
144	48	2.3	9436	6	E07266	E07266 Blood-sprea
145	48	2.3	9436	14	HPCJTA	D11168 Hepatitis C
146	47	2.3	232	14	HPCNS7CLN	M94411 Hepatitis C
147	47	2.3	241	14	HPCNS4CLN	M94402 Hepatitis C
148	47	2.3	543	14	AF369232	AF369232 Hepatitis
149	47	2.3	543	14	AF369241	AF369241 Hepatitis
150	47	2.3	543	14	AF369242	AF369242 Hepatitis
151	47	2.3	543	14	AF369243	AF369243 Hepatitis
152	47	2.3	9502	6	E08263	E08263 gRNA of Hep
153	47	2.3	9502	6	E08264	E08264 cDNA of Hep
154	47	2.3	9502	14	HPCHCJ1	D10749 Hepatitis C
155	44	2.1	149	14	HPCEB16NS	D10128 Hepatitis C
156	44	2.1	149	14	HPCEB17NS	D10129 Hepatitis C
157	44	2.1	414	14	HCU14272	U14272 Hepatitis C
158	44	2.1	492	6	AR118672	AR118672 Sequence
159	44	2.1	543	14	AF369236	AF369236 Hepatitis
160	44	2.1	761	14	AF035123	AF035123 Hepatitis
161	44	2.1	761	14	AF035124	AF035124 Hepatitis
162	44	2.1	761	14	AF035125	AF035125 Hepatitis
163	44	2.1	761	14	AF035126	AF035126 Hepatitis
164	44	2.1	761	14	AF035127	AF035127 Hepatitis
165	44	2.1	761	14	AF035128	AF035128 Hepatitis
166	44	2.1	761	14	AF035129	AF035129 Hepatitis
167	44	2.1	761	14	AF035130	AF035130 Hepatitis
168	44	2.1	761	14	AF035131	AF035131 Hepatitis
169	44	2.1	761	14	AF035132	AF035132 Hepatitis
170	44	2.1	761	14	AF035133	AF035133 Hepatitis
171	44	2.1	761	14	AF035136	AF035136 Hepatitis
172	44	2.1	761	14	AF035137	AF035137 Hepatitis
173	44	2.1	761	14	AF035139	AF035139 Hepatitis
174	44	2.1	761	14	AF035140	AF035140 Hepatitis
175	44	2.1	761	14	AF035141	AF035141 Hepatitis
176	44	2.1	761	14	AF035142	AF035142 Hepatitis
177	44	2.1	761	14	AF035143	AF035143 Hepatitis
178	44	2.1	761	14	AF035145	AF035145 Hepatitis
179	44	2.1	761	14	AF035147	AF035147 Hepatitis
180	44	2.1	761	14	AF035148	AF035148 Hepatitis
181	44	2.1	761	14	AF035150	AF035150 Hepatitis
182	44	2.1	800	6	AR118675	AR118675 Sequence
183	44	2.1	816	6	I32194	I32194 Sequence 83
184	44	2.1	816	6	I34285	I34285 Sequence 83
185	44	2.1	816	6	I82490	I82490 Sequence 83
186	44	2.1	816	6	BD140415	BD140415 Hepatitis
187	44	2.1	2219	6	AR118735	AR118735 Sequence
188	44	2.1	2499	6	AR404934	AR404934 Sequence
189	44	2.1	2499	6	AX395311	AX395311 Sequence
190	44	2.1	2520	12	AF127762	AF127762 Synthetic
191	44	2.1	2579	6	AR118674	AR118674 Sequence
192	44	2.1	2579	6	I06428	I06428 Sequence 44
193	44	2.1	2579	6	I09327	I09327 Sequence 6
194	44	2.1	3075	6	AR176484	AR176484 Sequence
195	44	2.1	3075	6	I71895	I71895 Sequence 11
196	44	2.1	3075	6	I81886	I81886 Sequence 11
197	44	2.1	3297	6	AR408363	AR408363 Sequence
198	44	2.1	3297	6	AX454820	AX454820 Sequence
199	44	2.1	6609	6	AX663427	AX663427 Sequence
200	44	2.1	8451	6	AX663429	AX663429 Sequence
201	44	2.1	9401	6	AR030378	AR030378 Sequence
202	44	2.1	9414	14	HPCUNKCDS	M96362 Hepatitis C
203	44	2.1	9415	14	HCU16362	U16362 Hepatitis C
204	44	2.1	9416	6	AR110845	AR110845 Sequence
205	44	2.1	9416	6	BD069999	BD069999 Functiona
206	44	2.1	9472	6	AR301390	AR301390 Sequence
207	44	2.1	9618	14	AF271632	AF271632 Hepatitis
208	44	2.1	9620	6	AX164579	AX164579 Sequence
209	44	2.1	9620	6	AX164581	AX164581 Sequence
210	44	2.1	9622	6	AX663428	AX663428 Sequence
211	44	2.1	19798	6	AX164588	AX164588 Sequence

212	44	2.1	19912	6	AX164586	AX164586 Sequence
213	44	2.1	20160	6	AX164590	AX164590 Sequence
214	44	2.1	20217	6	AX164594	AX164594 Sequence
215	44	2.1	20247	6	AX164596	AX164596 Sequence
216	44	2.1	20316	6	AX164592	AX164592 Sequence
217	43	2.1	347	6	AR118677	AR118677 Sequence
218	43	2.1	543	14	AF369238	AF369238 Hepatitis
219	43	2.1	2748	6	E09628	E09628 DNA encodin
220	43	2.1	3559	14	HPCPNS234S	D11397 Hepatitis C
221	42	2.0	414	14	HCU14270	U14270 Hepatitis C
222	41	2.0	268	6	AR118670	AR118670 Sequence
223	41	2.0	307	6	AR118733	AR118733 Sequence
224	41	2.0	308	6	I32192	I32192 Sequence 79
225	41	2.0	308	6	I34283	I34283 Sequence 79
226	41	2.0	308	6	I82488	I82488 Sequence 79
227	41	2.0	308	6	BD140413	BD140413 Hepatitis
228	41	2.0	407	14	S44060	S44060 {nonstructu
229	41	2.0	477	6	AR061073	AR061073 Sequence
230	41	2.0	477	6	AR061086	AR061086 Sequence
231	41	2.0	477	6	I13460	I13460 Sequence 7
232	41	2.0	477	6	I13938	I13938 Sequence 7
233	41	2.0	477	6	I23792	I23792 Sequence 7
234	41	2.0	477	6	AX032703	AX032703 Sequence
235	41	2.0	477	6	BD078639	BD078639 Hepatitis
236	41	2.0	480	6	AR118668	AR118668 Sequence
237	41	2.0	480	6	BD091383	BD091383 HCV culti
238	41	2.0	495	6	I32193	I32193 Sequence 81
239	41	2.0	495	6	I34284	I34284 Sequence 81
240	41	2.0	495	6	I82489	I82489 Sequence 81
241	41	2.0	543	14	AF369239	AF369239 Hepatitis
242	41	2.0	543	14	AF369240	AF369240 Hepatitis
243	41	2.0	558	6	AR061074	AR061074 Sequence
244	41	2.0	558	6	AR061087	AR061087 Sequence
245	41	2.0	558	6	I13461	I13461 Sequence 9
246	41	2.0	558	6	I13939	I13939 Sequence 9
247	41	2.0	558	6	I23793	I23793 Sequence 9
248	41	2.0	558	6	AX032705	AX032705 Sequence
249	41	2.0	558	6	BD078640	BD078640 Hepatitis
250	41	2.0	761	14	AF035122	AF035122 Hepatitis
251	41	2.0	761	14	AF035134	AF035134 Hepatitis
252	41	2.0	761	14	AF035135	AF035135 Hepatitis
253	41	2.0	761	14	AF035144	AF035144 Hepatitis
254	41	2.0	761	14	AF035146	AF035146 Hepatitis
255	41	2.0	761	14	AF035149	AF035149 Hepatitis
256	41	2.0	943	6	AR031237	AR031237 Sequence
257	41	2.0	943	6	AR145053	AR145053 Sequence
258	41	2.0	1382	6	AR118669	AR118669 Sequence
259	41	2.0	1382	6	I06424	I06424 Sequence 42
260	41	2.0	1932	6	AR127809	AR127809 Sequence
261	41	2.0	1932	6	BD081910	BD081910 Hepatitis
262	41	2.0	7659	6	AR127811	AR127811 Sequence
263	41	2.0	7659	6	BD081912	BD081912 Hepatitis
264	41	2.0	8157	6	AR127810	AR127810 Sequence
265	41	2.0	8157	6	BD081911	BD081911 Hepatitis
266	41	2.0	9400	14	HCU89019	U89019 Hepatitis C
267	39	1.9	9538	14	AB016785	AB016785 Hepatitis
268	38	1.8	372	14	AF379308	AF379308 Hepatitis
269	38	1.8	543	14	AF369234	AF369234 Hepatitis
270	38	1.8	543	14	AF369244	AF369244 Hepatitis
271	38	1.8	9391	6	E04421	E04421 DNA encodin
272	38	1.8	9391	6	E07579	E07579 Gene coding
273	38	1.8	9440	14	S62220	S62220 polyprotein
274	38	1.8	9487	6	E08443	E08443 DNA fragmen
275	38	1.8	9487	14	HPCCGS	D14853 Hepatitis C
276	38	1.8	9573	14	AB049090	AB049090 Hepatitis
277	38	1.8	9616	14	AF139594	AF139594 Hepatitis
278	38	1.8	9658	14	AB119282	AB119282 Hepatitis
279	37	1.8	221	14	HPCNS3CLN	M94452 Hepatitis C
280	37	1.8	543	14	AF369215	AF369215 Hepatitis
281	36	1.7	85	6	AX360960	AX360960 Sequence
282	36	1.7	85	6	AX377626	AX377626 Sequence
283	36	1.7	543	14	AF369216	AF369216 Hepatitis
284	35	1.7	162	14	HPCHCV36	M59908 Hepatitis C
285	35	1.7	162	14	HPCHCV49	M60338 Hepatitis C
286	35	1.7	267	6	AR037528	AR037528 Sequence
287	35	1.7	267	6	E09291	E09291 DNA encodin
288	35	1.7	372	14	AF379284	AF379284 Hepatitis
289	35	1.7	390	6	AX361036	AX361036 Sequence
290	35	1.7	390	6	AX377702	AX377702 Sequence
291	35	1.7	414	14	HCU14260	U14260 Hepatitis C
292	35	1.7	414	14	HCU14279	U14279 Hepatitis C
293	35	1.7	453	6	AX360952	AX360952 Sequence
294	35	1.7	453	6	AX377618	AX377618 Sequence
295	35	1.7	475	6	AX361035	AX361035 Sequence
296	35	1.7	475	6	AX377701	AX377701 Sequence
297	35	1.7	495	6	BD140414	BD140414 Hepatitis
298	35	1.7	520	14	HPCNS34C	M86768 Hepatitis C
299	35	1.7	520	14	HPCNS34K	M86777 Hepatitis C
300	35	1.7	1072	14	HCVPNS3	X78952 Hepatitis C
301	35	1.7	2093	6	E07947	E07947 Non-A non-B
302	35	1.7	7475	6	A91965	A91965 Sequence 1
303	35	1.7	7475	6	AR031992	AR031992 Sequence
304	35	1.7	7475	6	AR207294	AR207294 Sequence
305	35	1.7	9033	14	HCJ238800	AJ238800 Hepatitis
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308	35	1.7	9379	14	AF165057	AF165057 Hepatitis
309	35	1.7	9379	14	AF207758	AF207758 Hepatitis
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ALIGNMENTS

RESULT 1
AX441176
LOCUS AX441176 2061 bp DNA linear PAT 28-JUN-2002
DEFINITION Sequence 16 from Patent WO0213855.
ACCESSION AX441176
VERSION AX441176.1 GI:21665758
KEYWORDS .
SOURCE synthetic construct
ORGANISM synthetic construct
artificial sequences.
REFERENCE 1
AUTHORS Sallberg,M. and Hultgren,C.
TITLE Vaccines containing ribavirin and methods of use thereof
JOURNAL Patent: WO 0213855-A 16 21-FEB-2002;
TRIPEP AB (SE)
FEATURES Location/Qualifiers
source 1. .2061
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/note="Hepatitis C virus NS3/4A coding region"
ORIGIN

Query Match 100.0%; Score 2061; DB 6; Length 2061;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 2061; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy         61 AGCTTGACCGGCCGGGACAAAAACCAGGTGGAGGGTGAGGTTCAGATCGTGTCAACTGCT 120
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Qy       1441 GAGCGTCCTTCTGGCATGTTTGACTCGTCTGTCCTCTGCGAGTGCTATGACGCGGGTTGT 1500
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Db       2041 GATGAAATGGAAGAGTGCTGA 2061
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LOCUS       AX467113               2061 bp    DNA     linear   PAT 17-JUL-2002
DEFINITION  Sequence 1 from Patent WO0214362.
ACCESSION   AX467113
VERSION     AX467113.1  GI:21900425
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Sallberg,M.
  TITLE     A hepatitis c virus non-structural ns3/4a fusion gene
  JOURNAL   Patent: WO 0214362-A 1 21-FEB-2002;
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/note="Hepatitis C virus NS3/4A coding region"

ORIGIN

Query Match 100.0%; Score 2061; DB 6; Length 2061;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 2061; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db          1 ATGGCGCCTATCACGGCCTATGCCCAGCAGACAAGGGGCCTTTTGGGATGCATAATCACC 60

Qy         61 AGCTTGACCGGCCGGGACAAAAACCAGGTGGAGGGTGAGGTTCAGATCGTGTCAACTGCT 120
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Db       2041 GATGAAATGGAAGAGTGCTGA 2061


RESULT 3
HEC278830
LOCUS       HEC278830               9610 bp    RNA     linear   VRL 03-JAN-2001
DEFINITION  Hepatitis C virus genomic RNA for polyprotein gene.
ACCESSION   AJ278830
VERSION     AJ278830.1  GI:9843676
KEYWORDS    core protein; envelop protein 1; envelop protein 2; non-structural
            protein 2; non-structural protein 3; non-structural protein 4a;
            Non-structural protein 4b; non-structural protein 5A;
            non-structural protein 5B; ORF1; ORF10; ORF2; ORF3; ORF4; ORF5;
            ORF6; ORF7; ORF8; ORF9; polyprotein.
SOURCE      Hepatitis C virus
  ORGANISM  Hepatitis C virus
            Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
            Hepacivirus.
REFERENCE   1
  AUTHORS   Kumar,U., Tuthill,T., Thomas,H.C. and Monjardino,J.
  TITLE     Sequence, expression and reconstitution of an HCV genome from a
            British isolate derived from a single blood donation
  JOURNAL   J. Viral Hepat. 7 (6), 459-465 (2000)
  MEDLINE   21014672
   PUBMED   11115058
REFERENCE   2  (bases 1 to 9610)
  AUTHORS   Kumar,U.
  TITLE     Direct Submission
  JOURNAL   Submitted (11-AUG-2000) Kumar U., Virology, GlaxoWellcome Research
            centre, Gunnels Wood Road, Stevenage, Hertfordshire, SG1 2NY,
            UNITED KINGDOM
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                     TIASPKGPVIQMYTNVDQDLVGWPAPQGARSLTPCTCGSSDLYLVTRHADVIPVRRRG
                     DGRGSLLSPRPISYLKGSSGGPLLCPAGHAVGIFRAAVCTRGVAKAVEFVPVENLETT
                     MRSPVFTDNSAPPAVPQSFQVAHLHAPTGSGKSTKVPAAYAAQGYKVLVLNPSVAATL
                     GFGAYMSKAHGIDPNIRTGVRTITTGSPITYSTYGKFLADGGCSGGAYDIIICDECHS
                     TDATSILGIGTVLDQAETAGARLVVLATATPPGSVTVPHSNIEEVALSTTGEIPFYGK
                     AIPLEVIKGGRHLIFCHSKKKCDDLAAKLVALGINAVAYYRGLDVSVIPTSGDVVVVA
                     TDALMTGFTGDFDSVIDCNTCVTQTVDFSLDPTFTIETTTLPQDAVSRTQRRGRTGRG
                     KPGIYRFVAPGERPSGMFDSAVLCECYDAGCAWYELTPAETTVRLRAYMNTPGLPVCQ
                     DHLEFWEGVFTGLTHIDAHFLSQTKQSGENLPYLVAYQATVCARAQAPPPSWDQMWKC
                     LIRLKPTLHGSTPLLYRLGAVQNEVTLTHPVTKYIMTCMSADLEIVTSTWVLVGGVLA
                     ALAAYCLSTGCVVIVGRIVLSGKPPIIPDQEVLYREFDEMEECSQHLPYIEPGMMLAE
                     QFKQKALALLQTASRQAEVIAPAVQTNWQRLEAFWAKHMWNFISGIQYLAGLSTLPGN
                     PAIASLMAFTAAVTSPLTTSQTLLFNILGGWVAAQLAAPGAATAFVGAGLAGAAIGSV
                     GLGKVLVDILAGYGAGVAGALVAFKIMSGEVPSTEDMVNLLPAILSPGALVVGVVCAT
                     ILRRHVGPGEGAVQWMNRLIAFASRGNHVSPTHYVPESDAAARVTAILSSLTVTQLLR
                     RLHQWVSSESTTPCSGSWLRDIWDWICEVLSDFKTWLKAKLMPQLPGIPLVSCQRGYR
                     GVWQGDGVMHTRCHCGAEITGHVKNGTMRIVGPKTCRNMWSGTFPINAYTTGPCTPLP
                     APNYTFALWRVSAEEYVEIRRVGDFHYVTGMTTDNLRCPCQVPSPEFFTELDGVRLHR
                     FAPPCKPLLRDEVSFRVGLHDYPVGSQLPCEPEPDVAVVTSMLTDPSHITAEAAGRRL
                     ARGSPPSVASSSASQLSAPSLKATCTTNHDSPDAELIEANLLWRQEMGGNITRVESEN
                     KVVVLDSFDPLVAEEDEREVSVPAEILRKSRRFAEALAIWARPDYNPPLLETWKKPDY
                     EPPVVHGCPLPPPQSPPVPSPRKKRTVVLTESTVSTALAELATKSFGSSSTSGIVGDS
                     TTTPSEPAPSVRSPDSDAESCSSMPPLEGEPGDPDLSDGSWSTVSSGADGEDVVCCSM
                     SYSWTGALVTPCAAEEQKLPINALSNSLLRHHNLVYSTTSRSACQRQKKVTFDRLQVL
                     DNHYQDVLKEVKAAASKVKANLLSVEEACSLTPPHSARSKFGYGAKDVRCHARKAVNH
                     INSVWKDLLEDNVTPIDTTIMAKNEVFCVQPEKGGRKPARLIVFPDLGVRVCEKMALY
                     DVVSKLPPAVMGSSYGFQYSPGQRVEFLVQAWKSKKTPMGFSYDTRCFDSTVTESDIR
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     mat_peptide     345. .914
                     /product="core protein"
                     /note="ORF2"
     mat_peptide     915. .1490
                     /product="envelop protein 1"
                     /note="ORF3"
     mat_peptide     1491. .2768
                     /product="envelop protein 2"
                     /note="ORF4"
     mat_peptide     2769. .3419
                     /product="non-structural protein 2"
                     /note="ORF5"
     mat_peptide     3420. .5312
                     /product="non-structural protein 3"
                     /note="ORF6"
     mat_peptide     5313. .5474
                     /product="non-structural protein 4a"
                     /note="ORF7"
     mat_peptide     5475. .6257
                     /product="non-structural protein 4b"
                     /note="ORF8"
     mat_peptide     6258. .7601
                     /product="non-structural protein 5a"
                     /note="ORF9"
     mat_peptide     7602. .9374
                     /product="non-structural protein 5b"
                     /note="ORF10"
ORIGIN

  Query Match             4.5%;  Score 92;  DB 14;  Length 9610;
  Best Local Similarity   100.0%;  Pred. No. 5.8e-44;
  Matches   92;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1519 CCCGCCGAGACCACAGTTAGGCTACGAGCATACATGAACACCCCGGGACTTCCCGTGTGC 1578
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Db       4935 CCCGCCGAGACCACAGTTAGGCTACGAGCATACATGAACACCCCGGGACTTCCCGTGTGC 4994

Qy       1579 CAAGACCATCTTGAATTTTGGGAGGGCGTCTT 1610
             ||||||||||||||||||||||||||||||||
Db       4995 CAAGACCATCTTGAATTTTGGGAGGGCGTCTT 5026


RESULT 4
AF511949
LOCUS       AF511949               9426 bp    RNA     linear   VRL 13-JUN-2002
DEFINITION  Hepatitis C virus isolate XF223 polyprotein gene, complete
            sequence.
```

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ACCESSION   AF511949
VERSION     AF511949.1  GI:21397076
KEYWORDS    .
SOURCE      Hepatitis C virus
  ORGANISM  Hepatitis C virus
            Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
            Hepacivirus.
REFERENCE   1  (bases 1 to 9426)
  AUTHORS   Fan,X. and Di Bisceglie,A.M.
  TITLE     Clonal Nature of Hepatitis C Virus
  JOURNAL   Unpublished
REFERENCE   2  (bases 1 to 9426)
  AUTHORS   Fan,X. and Di Bisceglie,A.M.
  TITLE     Direct Submission
  JOURNAL   Submitted (14-MAY-2002) Gastroenterology & Hepatology, Saint Louis
            University School of Medicine, 1402 South Grand Blvd., St. Louis,
            MO 63104, USA
FEATURES             Location/Qualifiers
     source          1. .9426
                     /organism="Hepatitis C virus"
                     /mol_type="genomic RNA"
                     /strain="LTD3-2"
                     /isolate="XF223"
                     /db_xref="taxon:11103"
     misc_feature    1. .9426
                     /note="similar to polyprotein"
ORIGIN

  Query Match             3.7%;  Score 76;  DB 14;  Length 9426;
  Best Local Similarity   100.0%;  Pred. No. 4.6e-34;
  Matches   76;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1273 TCGGTGATAGACTGCAACACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACC 1332
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       4690 TCGGTGATAGACTGCAACACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACC 4749

Qy       1333 TTCACCATTGAGACAA 1348
              ||||||||||||||||
Db       4750 TTCACCATTGAGACAA 4765


RESULT 5
A22779
LOCUS       A22779                   943 bp    DNA     linear   PAT 24-JAN-1995
DEFINITION  non-structural coding region.
ACCESSION   A22779
VERSION     A22779.1  GI:832940
KEYWORDS    .
SOURCE      Hepatitis C virus
  ORGANISM  Hepatitis C virus
            Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
            Hepacivirus.
REFERENCE   1  (bases 1 to 943)
  AUTHORS   .
  TITLE     NUCLEOTIDE AND PEPTIDE SEQUENCES OF AN ISOLATE OF THE HEPATITIS C
            VIRUS, DIAGNOSTIC AND THERAPEUTIC APPLICATIONS THEREOF
  JOURNAL   Patent: WO 9221759-A (4) 10-DEC-1992;
FEATURES             Location/Qualifiers
     source          1. .943
                     /organism="Hepatitis C virus"
                     /mol_type="unassigned DNA"
                     /db_xref="taxon:11103"
ORIGIN

  Query Match             3.0%;  Score 62;  DB 6;  Length 943;
  Best Local Similarity   100.0%;  Pred. No. 2e-25;
  Matches   62;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1915 GGCGGCGTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTGCGTGGTCATAGTA 1974
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        630 GGCGGCGTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTGCGTGGTCATAGTA 689

Qy       1975 GG 1976
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Db        690 GG 691


RESULT 6
AR031209
LOCUS       AR031209                 943 bp    DNA     linear   PAT 29-SEP-1999
DEFINITION  Sequence 6 from patent US 5866139.
ACCESSION   AR031209
VERSION     AR031209.1  GI:5945498
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 943)
  AUTHORS   Brechot,C., Kremsdorf,D. and Porchon,C.
  TITLE     Nucleotide and peptide sequences of a hepatitis C virus isolate,
            diagnostic and therapeutic applications
  JOURNAL   Patent: US 5866139-A 6 02-FEB-1999;
FEATURES             Location/Qualifiers
     source          1. .943
                     /organism="unknown"
                     /mol_type="unassigned DNA"
ORIGIN

  Query Match             3.0%;  Score 62;  DB 6;  Length 943;
  Best Local Similarity   100.0%;  Pred. No. 2e-25;
  Matches   62;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1915 GGCGGCGTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTGCGTGGTCATAGTA 1974
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        630 GGCGGCGTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTGCGTGGTCATAGTA 689

Qy       1975 GG 1976
              ||
Db        690 GG 691


RESULT 7
AR145025
LOCUS       AR145025                 943 bp    DNA     linear   PAT 08-AUG-2001
DEFINITION  Sequence 6 from patent US 6210962.
ACCESSION   AR145025
VERSION     AR145025.1  GI:15106892
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 943)
  AUTHORS   Brechot,C., Kremsdorf,D. and Porchon,C.
  TITLE     Nucleotide and peptide sequences of an isolate of the hepatitis C
            virus, diagnostic and therapeutic applications thereof
  JOURNAL   Patent: US 6210962-A 6 03-APR-2001;
FEATURES             Location/Qualifiers
     source          1. .943
                     /organism="unknown"
                     /mol_type="unassigned DNA"
ORIGIN

  Query Match             3.0%;  Score 62;  DB 6;  Length 943;
  Best Local Similarity   100.0%;  Pred. No. 2e-25;
  Matches   62;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1915 GGCGGCGTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTGCGTGGTCATAGTA 1974
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        630 GGCGGCGTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTGCGTGGTCATAGTA 689

Qy       1975 GG 1976
              ||
Db        690 GG 691


RESULT 8
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HPCNS3NS4
LOCUS       HPCNS3NS4                943 bp    RNA     linear   VRL 02-FEB-1999
DEFINITION  Hepatitis C virus NS3/NS4 gene for ORF 1, partial cds.
ACCESSION   D10664 D01103
VERSION     D10664.1  GI:221623
KEYWORDS    nonstructural protein; NS3/NS4.
SOURCE      Hepatitis C virus
  ORGANISM  Hepatitis C virus
            Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
            Hepacivirus.
REFERENCE   1  (bases 1 to 943)
  AUTHORS   Kremsdorf,D., Porchon,C., Kim,J.P., Reyes,G.R. and Brechot,C.
  TITLE     Partial nucleotide sequence analysis of a French hepatitis C virus:
            implications for HCV genetic variability in the E2/NS1 protein
  JOURNAL   J. Gen. Virol. 72 (Pt 10), 2557-2561 (1991)
  MEDLINE   92013977
   PUBMED   1655961
REFERENCE   2  (sites)
  AUTHORS   Mink,M.A., Benichou,S., Madaule,P., Tiollais,P., Prince,A.M. and
            Inchauspe,G.
  TITLE     Characterization and mapping of a B-cell immunogenic domain in
            hepatitis C virus E2 glycoprotein using a yeast peptide library
  JOURNAL   Virology 200 (1), 246-255 (1994)
  MEDLINE   94174722
   PUBMED   7510436
REFERENCE   3  (bases 1 to 943)
  AUTHORS   Kremsdorf,D.
  TITLE     Direct Submission
  JOURNAL   Submitted (17-JUL-1991) Dina Kremsdorf, INSERM U75; CHU Necker,
            156, rue de Vaugirard, Paris 75015, France (E-mail:BEAUNE@FRCITI51,
            Tel:40659911)
FEATURES             Location/Qualifiers
     source          1. .943
                     /organism="Hepatitis C virus"
                     /mol_type="genomic RNA"
                     /isolate="HCVE1"
                     /db_xref="taxon:11103"
                     /note="isolated from serum of human patient MIC"
     gene            1. .943
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     CDS             <1. .>943
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                     /protein_id="BAA01515.1"
                     /db_xref="GI:2160336"
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                     FWEGVFTGLTHIDAHFLSQTKQSGENLPYLVAYQATVCARAQAPPPSWDQMWKCLIRL
                     KPTLHGPTPLLYRLGAVQNEVTLTHPITKYIMTCMSADLEVVTSTWVLVGGVLAALAA
                     YCLSTGCVVIVGRVILSGKPAIIPDREVLYREFDEMEECSQHLPYIEQGMMLAEQFKQ
                     KALGLLQTRSRQAEVITPAVQTNWQRLEAFWAKHMWN"
ORIGIN

  Query Match             3.0%;  Score 62;  DB 14;  Length 943;
  Best Local Similarity   100.0%;  Pred. No. 2e-25;
  Matches   62;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1915 GGCGGCGTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTGCGTGGTCATAGTA 1974
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        630 GGCGGCGTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTGCGTGGTCATAGTA 689

Qy       1975 GG 1976
              ||
Db        690 GG 691


RESULT 9
AF290978
LOCUS       AF290978                9365 bp    DNA     linear   VRL 27-AUG-2000
DEFINITION  Hepatitis C virus isolate colonel complete genome.
ACCESSION   AF290978
VERSION     AF290978.1  GI:9930556
KEYWORDS    .
SOURCE      Hepatitis C virus
  ORGANISM  Hepatitis C virus
            Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
            Hepacivirus.
REFERENCE   1  (bases 1 to 9365)
  AUTHORS   Desai,S.M., Devare,S. and Yamaguchi,J.
  TITLE     Hepatitis C Virus
  JOURNAL   Unpublished
REFERENCE   2  (bases 1 to 9365)
  AUTHORS   Desai,S.M., Devare,S. and Yamaguchi,J.
  TITLE     Direct Submission
  JOURNAL   Submitted (28-JUL-2000) 90D, Abbott Laboratories, 1401 Sheridan Rd,
            North Chicago, IL 60064, USA
FEATURES             Location/Qualifiers
     source          1. .9365
                     /organism="Hepatitis C virus"
                     /mol_type="genomic DNA"
                     /isolate="colonel"
                     /db_xref="taxon:11103"
                     /lab_host="Pan troglodytes"
                     /note="genotype: HCV 1"
     CDS             330. .9365
                     /note="contains core, E1, E2, NS2, NS3, NS4A/B, and NS5A/B
                     proteins"
                     /codon_start=1
                     /product="polyprotein"
                     /protein_id="AAG02099.1"
                     /db_xref="GI:9930557"
                     /translation="MSTNPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRL
                     GVRATRKTSERSQPRGRRQPIPKARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRG
                     SRPSWGPTDPRRRSRNLGKVIDTLTCGFADLMGYIPLVGAPLGGAARALAHGVRVLED
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                     VGDLCGSVFLVGQLFTFSPRRHWTTQDCNCSIYPGHITGHRMAWDMMMNWSPTAALVV
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                     PPCVIGGVGNNTLLCPTDCFRKHPEATYSRCGSGPWITPRCMVDYPYRLWHYPCTINY
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                     MRSPVFTDNSSPPAVPQSFQVAHLHAPTGSGKSTKVPAAYAAQGYKVLVLNPSVAATL
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                     KPGIYRFVAPGERPSGMFDSSVLCECYDAGCAWYELTPAETTVRLRAYMNTPGLPVCQ
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                     QFKQEALGLLQTASRQAEVITPAVQTNWQKLEAFWAKHMWNFISGTQYLAGLSTLPGN
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                     ILRRHVGPGEGAVQWMNRLIAFASRGNHVSPTHYVPESDAAARVTAILSNLTVTQLLR
                     RLHQWIGSECTTPCSGSWLRDIWDWICEVLSDFKTWLKAKLMPQLPGIPFVSCQRGYR
                     GVWRGDGIMHTRCHCGAEITGHVKNGTMRIVGPRTCRNMWSGTFPINAYTTGPCTPLP
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                     ARGSPPSMASSSASQLSAPSLKATCTTNHDSPDAELIEANLLWRQEMGGNITRVESEN
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                     TTTSSEPAPSGCPPDSDVESYSSMPPLEGEPGDPDFSDGSWSTVSSGADTEDVVCCSM
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INSVWKDLLEDSVTPIDTTIMAKNEVFCVQPEKGGRKPARLIVFPDLGVRVCEKMALY
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TEEAIYQCCDLDPQARVAIKSLTERLYVGGPLTNSRGENCGYRRCRASGVLTTSCGNT
LTCYIKARAACRAAGLQDRTMLVCGDDLVVICESAGVQEDAASLRAFTEAMTRYSAPP
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VGIYLLPNR"

ORIGIN

Query Match 3.0%; Score 62; DB 14; Length 9365;
Best Local Similarity 100.0%; Pred. No. 2.1e-25;
Matches 62; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 970 GCTACCCCTCCGGGCTCCGTCACTGTGCCCCATCCTAACATCGAGGAGGTTGCTCTGTCC 1029
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Db 4374 GCTACCCCTCCGGGCTCCGTCACTGTGCCCCATCCTAACATCGAGGAGGTTGCTCTGTCC 4433

Qy 1030 AC 1031
||
Db 4434 AC 4435

RESULT 10
AF511950
LOCUS AF511950 9395 bp RNA linear VRL 13-JUN-2002
DEFINITION Hepatitis C virus isolate XF224 polyprotein gene, complete sequence.
ACCESSION AF511950
VERSION AF511950.1 GI:21397077
KEYWORDS .
SOURCE Hepatitis C virus
ORGANISM Hepatitis C virus
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae; Hepacivirus.
REFERENCE 1 (bases 1 to 9395)
AUTHORS Fan,X. and Di Bisceglie,A.M.
TITLE Clonal Nature of Hepatitis C Virus
JOURNAL Unpublished
REFERENCE 2 (bases 1 to 9395)
AUTHORS Fan,X. and Di Bisceglie,A.M.
TITLE Direct Submission
JOURNAL Submitted (14-MAY-2002) Gastroenterology & Hepatology, Saint Louis University School of Medicine, 1402 South Grand Blvd., St. Louis, MO 63104, USA
FEATURES Location/Qualifiers
source 1. .9395
/organism="Hepatitis C virus"
/mol_type="genomic RNA"
/strain="LTD6-2"
/isolate="XF224"
/db_xref="taxon:11103"
misc_feature 1. .9395
/note="similar to polyprotein"
ORIGIN

Query Match 3.0%; Score 62; DB 14; Length 9395;
Best Local Similarity 100.0%; Pred. No. 2.1e-25;
Matches 62; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy -970 GCTACCCCTCCGGGCTCCGTCACTGTGCCCCATCCTAACATCGAGGAGGTTGCTCTGTCC 1029
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Db 4358 GCTACCCCTCCGGGCTCCGTCACTGTGCCCCATCCTAACATCGAGGAGGTTGCTCTGTCC 4417

Qy 1030 AC 1031
||
Db 4418 AC 4419

RESULT 11
BD226202
LOCUS BD226202 957 bp DNA linear PAT 17-JUL-2003
DEFINITION Improved immunodiagnostic assays using reducing agents.
ACCESSION BD226202
VERSION BD226202.1 GI:33035972
KEYWORDS JP 2002512370-A/4.
SOURCE unidentified
ORGANISM unidentified
unclassified.
REFERENCE 1 (bases 1 to 957)
AUTHORS Maertens,G., Louwagie,J., Bosman,A., Sablon,E. and Zrein,M.
TITLE Improved immunodiagnostic assays using reducing agents
JOURNAL Patent: JP 2002512370-A 4 23-APR-2002;
INNOGENETICS NV
COMMENT OS Hepatitis virus (hepatitis C virus)
PN JP 2002512370-A/4
PD 23-APR-2002
PF 15-APR-1999 JP 2000545027
PR 17-APR-1998 EP 98870087.8
PI GEERT MAERTENS,JOOST LOUWAGIE,ALFONS BOSMAN,ERWIN SABLON,MAAN
PI ZREIN
PC G01N33/543,C12N1/15,C12N1/19,C12N1/21,C12N5/10,C12N9/00 PC ,C12N15/09,C12Q1/25,
PC C12Q1/68,G01N33/573,G01N33/576,C12N5/00,C12N15/00 CC Improved immunodiagnostic assays using reducing agents FH Key Location/Qualifiers
FT source 1. .957
FT /organism='Hepatitis virus (hepatitis C FT virus)'.
FEATURES Location/Qualifiers
source 1. .957
/organism="unidentified"
/mol_type="genomic DNA"
/db_xref="taxon:32644"
ORIGIN

Query Match 3.0%; Score 61; DB 6; Length 957;
Best Local Similarity 100.0%; Pred. No. 8.5e-25;
Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 710 TGGGCTTTGGTGCTTACATGTCCAAGGCCCATGGGATTGATCCTAACATCAGGACTGGGG 769
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Db 344 TGGGCTTTGGTGCTTACATGTCCAAGGCCCATGGGATTGATCCTAACATCAGGACTGGGG 403

Qy 770 T 770
|
Db 404 T 404

RESULT 12
HPCNS10CLN
LOCUS HPCNS10CLN 241 bp ss-RNA linear VRL 02-AUG-1993
DEFINITION Hepatitis C virus (clone #10) nonstructural protein (NS3/NS4) gene, partial cds.
ACCESSION M94401 M84480
VERSION M94401.1 GI:329772
KEYWORDS nonstructural protein.
SOURCE Hepatitis C virus
ORGANISM Hepatitis C virus
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae; Hepacivirus.
REFERENCE 1 (bases 1 to 241)
AUTHORS Martell,M., Esteban,J.I., Quer,J., Genesca,J., Weiner,A., Esteban,R., Guardia,J. and Gomez,J.
TITLE Hepatitis C virus (HCV) circulates as a population of different but closely related genomes: quasispecies nature of HCV genome distribution
JOURNAL J. Virol. 66 (5), 3225-3229 (1992)
MEDLINE 92219420
PUBMED 1313927
COMMENT Original source text: Hepatitis C virus RNA.
FEATURES Location/Qualifiers
source 1. .241
/organism="Hepatitis C virus"
/mol_type="genomic RNA"

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                     /db_xref="taxon:11103"
     gene            1. .241
                     /gene="NS3/NS4"
     CDS             <1. .>241
                     /gene="NS3/NS4"
                     /codon_start=2
                     /product="nonstructural protein"
                     /protein_id="AAA45608.1"
                     /db_xref="GI:329773"
                     /translation="LRAYMNTPGLPVCQDHLEFWEGVFTGLTHIDAHFLSQTKQSGEN
                     LPYLVAYQATVCARAQAPPPSWDQMWKCLIRLKPTL"
ORIGIN

  Query Match             2.9%;  Score 59;  DB 14;  Length 241;
  Best Local Similarity   100.0%;  Pred. No. 1.4e-23;
  Matches   59;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1549 TACATGAACACCCCGGGACTTCCCGTGTGCCAAGACCATCTTGAATTTTGGGAGGGCGT 1607
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Db         11 TACATGAACACCCCGGGACTTCCCGTGTGCCAAGACCATCTTGAATTTTGGGAGGGCGT 69


RESULT 13
HPCNS11CLN
LOCUS       HPCNS11CLN               241 bp ss-RNA     linear   VRL 02-AUG-1993
DEFINITION  Hepatitis C virus (clone #11) nonstructural protein (NS3/NS4) gene,
            partial cds.
ACCESSION   M94400 M84480
VERSION     M94400.1  GI:329774
KEYWORDS    nonstructural protein.
SOURCE      Hepatitis C virus
  ORGANISM  Hepatitis C virus
            Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
            Hepacivirus.
REFERENCE   1  (bases 1 to 241)
  AUTHORS   Martell,M., Esteban,J.I., Quer,J., Genesca,J., Weiner,A.,
            Esteban,R., Guardia,J. and Gomez,J.
  TITLE     Hepatitis C virus (HCV) circulates as a population of different but
            closely related genomes: quasispecies nature of HCV genome
            distribution
  JOURNAL   J. Virol. 66 (5), 3225-3229 (1992)
  MEDLINE   92219420
   PUBMED   1313927
COMMENT     Original source text: Hepatitis C virus RNA.
FEATURES             Location/Qualifiers
     source          1. .241
                     /organism="Hepatitis C virus"
                     /mol_type="genomic RNA"
                     /db_xref="taxon:11103"
     gene            1. .241
                     /gene="NS3/NS4"
     CDS             <1. .>241
                     /gene="NS3/NS4"
                     /codon_start=2
                     /product="nonstructural protein"
                     /protein_id="AAA45609.1"
                     /db_xref="GI:329775"
                     /translation="LRAYMNTPGLPVCQDHLEFWEGVFTGLTHIDAHFLSQTKQSGEN
                     LPYLVAYQATVCARAQAPPPSWDQMWKCLTRLKPTL"
ORIGIN

  Query Match             2.9%;  Score 59;  DB 14;  Length 241;
  Best Local Similarity   100.0%;  Pred. No. 1.4e-23;
  Matches   59;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1549 TACATGAACACCCCGGGACTTCCCGTGTGCCAAGACCATCTTGAATTTTGGGAGGGCGT 1607
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         11 TACATGAACACCCCGGGACTTCCCGTGTGCCAAGACCATCTTGAATTTTGGGAGGGCGT 69


RESULT 14
HCVNSTP
LOCUS       HCVNSTP                  550 bp    RNA     linear   VRL 27-APR-1994
DEFINITION  Hepatitis C Virus sequence for non-structural protein.
ACCESSION   X71406
VERSION     X71406.1  GI:296161
KEYWORDS    hepatitis; non-structural protein; NS3/NS4.
SOURCE      Hepatitis C virus
  ORGANISM  Hepatitis C virus
            Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
            Hepacivirus.
REFERENCE   1
  AUTHORS   Vassilev,V.B., Viazov,S.O., Kotova,E.Y. and Nosikov,V.V.
  TITLE     Determination of the nucleotide sequence of the Russian variant of
            the hepatitis C virus
  JOURNAL   Mol. Gen. Mikrobiol. Virusol. 1, 33-37 (1994)
REFERENCE   2  (bases 1 to 550)
  AUTHORS   Vassilev,V.B.
  TITLE     Direct Submission
  JOURNAL   Submitted (13-APR-1993) V.B. Vassilev, Institute of Genetics &
            Selection of Industrial Microorganisms, 1-st Dorozhny proezd str.,
            1, 113545 Moscow, Russia, USSR
FEATURES             Location/Qualifiers
     source          1. .550
                     /organism="Hepatitis C virus"
                     /mol_type="genomic RNA"
                     /variety="Russian isolate"
                     /isolate="patient 11, with chronic non-A, non-B
                     post-transfusion hepatitis"
                     /db_xref="taxon:11103"
     gene            1. .550
                     /gene="NS3 /NS4"
     CDS             <1. .>550
                     /gene="NS3 /NS4"
                     /codon_start=3
                     /product="non-structural protein"
                     /protein_id="CAA50530.1"
                     /db_xref="GI:296162"
                     /db_xref="GOA:Q68960"
                     /db_xref="SPTREMBL:Q68960"
                     /translation="TVDFSLDPTFTIETTTLPQDAVSRTQRRGRTGRGKPGIYRFVAP
                     GERPSGMFDSSVLCECYDAGCAWYELTPAETTVRLRAYMNTPGLPVCQDHLEFWEGVF
                     TGLTQIDAHFLSQTKQSGENLPYLVAYQATVCARAQAPPPSWDQMWKCLIRLKPTLHG
                     PTPLLYRLGAVQNEVTLTHPVT"
ORIGIN

  Query Match             2.9%;  Score 59;  DB 14;  Length 550;
  Best Local Similarity   100.0%;  Pred. No. 1.5e-23;
  Matches   59;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1567 CTTCCCGTGTGCCAAGACCATCTTGAATTTTGGGAGGGCGTCTTTACGGGTCTCACCCA 1625
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        264 CTTCCCGTGTGCCAAGACCATCTTGAATTTTGGGAGGGCGTCTTTACGGGTCTCACCCA 322


RESULT 15
HPCNS34
LOCUS       HPCNS34                  1477 bp    DNA     linear   VRL 21-AUG-1995
DEFINITION  Hepatitis C virus nonstructural region.
ACCESSION   M60220
VERSION     M60220.1  GI:329802
KEYWORDS    nonstructural region.
SOURCE      Hepatitis C virus
  ORGANISM  Hepatitis C virus
            Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
            Hepacivirus.
REFERENCE   1  (bases 1 to 1477)
  AUTHORS   Li,J.S., Tong,S.P., Vitvitski,L., Lepot,D. and Trepo,C.
  TITLE     Two French genotypes of hepatitis C virus: homology of the
            predominant genotype with the prototype American strain
  JOURNAL   Gene 105 (2), 167-172 (1991)
  MEDLINE   92039028
   PUBMED   1718820
COMMENT     Original source text: Hepatitis C virus (strain F1a) plasma DNA.
FEATURES             Location/Qualifiers
     source          1. .1477
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                     /organism="Hepatitis C virus"
                     /mol_type="genomic DNA"
                     /strain="F1a"
                     /db_xref="taxon:11103"
                     /tissue_type="plasma"
ORIGIN

  Query Match             2.9%;  Score 59;  DB 14;  Length 1477;
  Best Local Similarity   100.0%;  Pred. No. 1.5e-23;
  Matches   59;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1903 TGGGTGCTCGTTGGCGGCGTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTG 1961
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        632 TGGGTGCTCGTTGGCGGCGTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTG 690


RESULT 16
AR124773
LOCUS       AR124773                382 bp    DNA     linear   PAT 16-MAY-2001
DEFINITION  Sequence 56 from patent US 6172189.
ACCESSION   AR124773
VERSION     AR124773.1  GI:14110134
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 382)
  AUTHORS   Devare,S.G., Desai,S.M., Casey,J.M., Dailey,S.H., Dawson,G.J.,
            Gutierrez,R.A., Lesniewski,R.R., Stewart,J.L. and Rupprecht,K.R.
  TITLE     Hepatitis C assay utilizing recombinant antigens
  JOURNAL   Patent: US 6172189-A 56 09-JAN-2001;
FEATURES             Location/Qualifiers
     source          1. .382
                     /organism="unknown"
                     /mol_type="unassigned DNA"
ORIGIN

  Query Match             2.8%;  Score 58;  DB 6;  Length 382;
  Best Local Similarity   100.0%;  Pred. No. 6e-23;
  Matches   58;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1291 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 1348
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         33 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 90


RESULT 17
AR353560
LOCUS       AR353560                382 bp    DNA     linear   PAT 17-AUG-2003
DEFINITION  Sequence 56 from patent US 6593083.
ACCESSION   AR353560
VERSION     AR353560.1  GI:33759550
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 382)
  AUTHORS   Devare,S.G., Desai,S.M., Casey,J.M., Dailey,S.H., Dawson,G.J.,
            Gutierrez,R.A., Lesniewski,R.R., Stewart,J.L. and Rupprecht,K.R.
  TITLE     Hepatitis C assay utilizing recombinant antigens
  JOURNAL   Patent: US 6593083-A 56 15-JUL-2003;
FEATURES             Location/Qualifiers
     source          1. .382
                     /organism="unknown"
                     /mol_type="genomic DNA"
ORIGIN

  Query Match             2.8%;  Score 58;  DB 6;  Length 382;
  Best Local Similarity   100.0%;  Pred. No. 6e-23;
  Matches   58;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1291 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 1348
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         33 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 90


RESULT 18
AR124772
LOCUS       AR124772                1414 bp    DNA     linear   PAT 16-MAY-2001
DEFINITION  Sequence 51 from patent US 6172189.
ACCESSION   AR124772
VERSION     AR124772.1  GI:14110133
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 1414)
  AUTHORS   Devare,S.G., Desai,S.M., Casey,J.M., Dailey,S.H., Dawson,G.J.,
            Gutierrez,R.A., Lesniewski,R.R., Stewart,J.L. and Rupprecht,K.R.
  TITLE     Hepatitis C assay utilizing recombinant antigens
  JOURNAL   Patent: US 6172189-A 51 09-JAN-2001;
FEATURES             Location/Qualifiers
     source          1. .1414
                     /organism="unknown"
                     /mol_type="unassigned DNA"
ORIGIN

  Query Match             2.8%;  Score 58;  DB 6;  Length 1414;
  Best Local Similarity   100.0%;  Pred. No. 6.1e-23;
  Matches   58;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1291 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 1348
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         22 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 79


RESULT 19
AR353559
LOCUS       AR353559                1414 bp    DNA     linear   PAT 17-AUG-2003
DEFINITION  Sequence 51 from patent US 6593083.
ACCESSION   AR353559
VERSION     AR353559.1  GI:33759549
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 1414)
  AUTHORS   Devare,S.G., Desai,S.M., Casey,J.M., Dailey,S.H., Dawson,G.J.,
            Gutierrez,R.A., Lesniewski,R.R., Stewart,J.L. and Rupprecht,K.R.
  TITLE     Hepatitis C assay utilizing recombinant antigens
  JOURNAL   Patent: US 6593083-A 51 15-JUL-2003;
FEATURES             Location/Qualifiers
     source          1. .1414
                     /organism="unknown"
                     /mol_type="genomic DNA"
ORIGIN

  Query Match             2.8%;  Score 58;  DB 6;  Length 1414;
  Best Local Similarity   100.0%;  Pred. No. 6.1e-23;
  Matches   58;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1291 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 1348
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Db         22 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 79


RESULT 20
AR124774
LOCUS       AR124774                1420 bp    DNA     linear   PAT 16-MAY-2001
DEFINITION  Sequence 57 from patent US 6172189.
ACCESSION   AR124774
VERSION     AR124774.1  GI:14110135
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
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REFERENCE   1  (bases 1 to 1420)
  AUTHORS   Devare,S.G., Desai,S.M., Casey,J.M., Dailey,S.H., Dawson,G.J.,
            Gutierrez,R.A., Lesniewski,R.R., Stewart,J.L. and Rupprecht,K.R.
  TITLE     Hepatitis C assay utilizing recombinant antigens
  JOURNAL   Patent: US 6172189-A 57 09-JAN-2001;
FEATURES             Location/Qualifiers
     source          1. .1420
                     /organism="unknown"
                     /mol_type="unassigned DNA"
ORIGIN

  Query Match             2.8%;  Score 58;  DB 6;  Length 1420;
  Best Local Similarity   100.0%;  Pred. No. 6.1e-23;
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Qy       1291 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 1348
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         22 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 79


RESULT 21
AR353561
LOCUS       AR353561                1420 bp    DNA     linear   PAT 17-AUG-2003
DEFINITION  Sequence 57 from patent US 6593083.
ACCESSION   AR353561
VERSION     AR353561.1  GI:33759551
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 1420)
  AUTHORS   Devare,S.G., Desai,S.M., Casey,J.M., Dailey,S.H., Dawson,G.J.,
            Gutierrez,R.A., Lesniewski,R.R., Stewart,J.L. and Rupprecht,K.R.
  TITLE     Hepatitis C assay utilizing recombinant antigens
  JOURNAL   Patent: US 6593083-A 57 15-JUL-2003;
FEATURES             Location/Qualifiers
     source          1. .1420
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                     /mol_type="genomic DNA"
ORIGIN

  Query Match             2.8%;  Score 58;  DB 6;  Length 1420;
  Best Local Similarity   100.0%;  Pred. No. 6.1e-23;
  Matches   58;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1291 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 1348
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Db         22 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 79


RESULT 22
HPCHCV35
LOCUS       HPCHCV35                162 bp ss-RNA     linear   VRL 20-MAY-1994
DEFINITION  Hepatitis C virus mRNA, partial cds.
ACCESSION   M55151
VERSION     M55151.1  GI:329764
KEYWORDS    .
SOURCE      Hepatitis C virus
  ORGANISM  Hepatitis C virus
            Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
            Hepacivirus.
REFERENCE   1  (bases 1 to 162)
  AUTHORS   Ulrich,P.P., Romeo,J.M., Lane,P.K., Kelly,I., Daniel,L.J. and
            Vyas,G.N.
  TITLE     Detection, semiquantitation, and genetic variation in hepatitis C
            virus sequences amplified from the plasma of blood donors with
            elevated alanine aminotransferase
  JOURNAL   J. Clin. Invest. 86 (5), 1609-1614 (1990)
  MEDLINE   91056164
   PUBMED   2173725
COMMENT     Original source text: Hepatitis C virus, cDNA to genomic RNA, from
            human plasma.
FEATURES             Location/Qualifiers
     source          1. .162
                     /organism="Hepatitis C virus"
                     /mol_type="genomic RNA"
                     /db_xref="taxon:11103"
                     /map="2895-3056"
     gene            1. .162
                     /gene="HCV"
     CDS             <1. .>162
                     /gene="HCV"
                     /note="ORF"
                     /codon_start=1
                     /protein_id="AAA45605.1"
                     /db_xref="GI:329765"
                     /translation="VAYYRGLDVSVIPTSGDVVVVATDALMTGYTGDFDSVIDCNTCV
                     TQTVDFSLDP"
ORIGIN

  Query Match             2.8%;  Score 57;  DB 14;  Length 162;
  Best Local Similarity   100.0%;  Pred. No. 2.5e-22;
  Matches   57;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1273 TCGGTGATAGACTGCAACACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCT 1329
             |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        106 TCGGTGATAGACTGCAACACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCT 162


RESULT 23
HPCNS17CLN
LOCUS       HPCNS17CLN              223 bp ss-RNA     linear   VRL 02-AUG-1993
DEFINITION  Hepatitis C virus (clone #17) nonstructural protein (NS3/NS4) gene,
            partial cds.
ACCESSION   M94451 M84480
VERSION     M94451.1  GI:329778
KEYWORDS    nonstructural protein.
SOURCE      Hepatitis C virus
  ORGANISM  Hepatitis C virus
            Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
            Hepacivirus.
REFERENCE   1  (bases 1 to 223)
  AUTHORS   Martell,M., Esteban,J.I., Quer,J., Genesca,J., Weiner,A.,
            Esteban,R., Guardia,J. and Gomez,J.
  TITLE     Hepatitis C virus (HCV) circulates as a population of different but
            closely related genomes: quasispecies nature of HCV genome
            distribution
  JOURNAL   J. Virol. 66 (5), 3225-3229 (1992)
  MEDLINE   92219420
   PUBMED   1313927
COMMENT     Original source text: Hepatitis C virus RNA.
FEATURES             Location/Qualifiers
     source          1. .223
                     /organism="Hepatitis C virus"
                     /mol_type="genomic RNA"
                     /db_xref="taxon:11103"
     gene            1. .223
                     /gene="NS3/NS4"
     CDS             <1. .>223
                     /gene="NS3/NS4"
                     /codon_start=2
                     /product="nonstructural protein"
                     /protein_id="AAA45611.1"
                     /db_xref="GI:329779"
                     /translation="TPGLPVCQVHLEPWEGVFTGITHIDAHFLSQTKQSGENLPYLVA
                     YQATVCARAQAPPPSWDQMWKCLIRLKPTL"
ORIGIN

  Query Match             2.8%;  Score 57;  DB 14;  Length 223;
  Best Local Similarity   100.0%;  Pred. No. 2.5e-22;
  Matches   57;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1723 CCTCCCCCGTCGTGGGACCAGATGTGGAAGTGCTTGATCCGTCTCAAGCCCACCCTC 1779
             |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        167 CCTCCCCCGTCGTGGGACCAGATGTGGAAGTGCTTGATCCGTCTCAAGCCCACCCTC 223
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RESULT 24
HPCNS15CLN
LOCUS       HPCNS15CLN               229 bp ss-RNA     linear   VRL 02-AUG-1993
DEFINITION  Hepatitis C virus (clone #15) nonstructural protein (NS3/NS4) gene,
            partial cds.
ACCESSION   M94449 M84480
VERSION     M94449.1  GI:329776
KEYWORDS    nonstructural protein.
SOURCE      Hepatitis C virus
  ORGANISM  Hepatitis C virus
            Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
            Hepacivirus.
REFERENCE   1  (bases 1 to 229)
  AUTHORS   Martell,M., Esteban,J.I., Quer,J., Genesca,J., Weiner,A.,
            Esteban,R., Guardia,J. and Gomez,J.
  TITLE     Hepatitis C virus (HCV) circulates as a population of different but
            closely related genomes: quasispecies nature of HCV genome
            distribution
  JOURNAL   J. Virol. 66 (5), 3225-3229 (1992)
  MEDLINE   92219420
   PUBMED   1313927
COMMENT     Original source text: Hepatitis C virus RNA.
FEATURES             Location/Qualifiers
     source          1. .229
                     /organism="Hepatitis C virus"
                     /mol_type="genomic RNA"
                     /db_xref="taxon:11103"
     gene            1. .229
                     /gene="NS3/NS4"
     CDS             <1. .>229
                     /gene="NS3/NS4"
                     /codon_start=2
                     /product="nonstructural protein"
                     /protein_id="AAA45610.1"
                     /db_xref="GI:329777"
                     /translation="MNTPGLPVCQDHLEFWEGVFTGLTHIDAHFLSQTKQSGENLPYL
                     VAYQATVCARAQAPPPSWDQVWKCLIRLKPTL"
ORIGIN

  Query Match             2.8%;  Score 57;  DB 14;  Length 229;
  Best Local Similarity   100.0%;  Pred. No. 2.5e-22;
  Matches   57;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1551 CATGAACACCCCGGGACTTCCCGTGTGCCAAGACCATCTTGAATTTTGGGAGGGCGT 1607
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 CATGAACACCCCGGGACTTCCCGTGTGCCAAGACCATCTTGAATTTTGGGAGGGCGT 57


RESULT 25
HPCNSCLN5
LOCUS       HPCNSCLN5                241 bp ss-RNA     linear   VRL 02-AUG-1993
DEFINITION  Hepatitis C virus (clone #5) nonstructural protein (NS3/Ns4) gene,
            partial cds.
ACCESSION   M94469 M84480
VERSION     M94469.1  GI:329852
KEYWORDS    nonstructural protein.
SOURCE      Hepatitis C virus
  ORGANISM  Hepatitis C virus
            Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
            Hepacivirus.
REFERENCE   1  (bases 1 to 241)
  AUTHORS   Martell,M., Esteban,J.I., Quer,J., Genesca,J., Weiner,A.,
            Esteban,R., Guardia,J. and Gomez,J.
  TITLE     Hepatitis C virus (HCV) circulates as a population of different but
            closely related genomes: quasispecies nature of HCV genome
            distribution
  JOURNAL   J. Virol. 66 (5), 3225-3229 (1992)
  MEDLINE   92219420
   PUBMED   1313927
COMMENT     Original source text: Hepatitis C virus RNA.
FEATURES             Location/Qualifiers
     source          1. .241
                     /organism="Hepatitis C virus"
                     /mol_type="genomic RNA"
                     /db_xref="taxon:11103"
     gene            1. .241
                     /gene="NS3/NS4"
     CDS             <1. .>241
                     /gene="NS3/NS4"
                     /codon_start=2
                     /product="nonstructural protein"
                     /protein_id="AAA45675.1"
                     /db_xref="GI:329853"
                     /translation="LRAYMNTPGLPVCQDHLEFWEGVFTGLTHIDAHFLSQTKQSGEN
                     LPYLVAYQATVCARAQAPPPSWDQMWKCLIRLKPTL"
ORIGIN

  Query Match             2.8%;  Score 57;  DB 14;  Length 241;
  Best Local Similarity   100.0%;  Pred. No. 2.5e-22;
  Matches   57;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1723 CCTCCCCCGTCGTGGGACCAGATGTGGAAGTGCTTGATCCGTCTCAAGCCCACCCTC 1779
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        185 CCTCCCCCGTCGTGGGACCAGATGTGGAAGTGCTTGATCCGTCTCAAGCCCACCCTC 241


RESULT 26
I32190
LOCUS       I32190                   281 bp    DNA     linear   PAT 06-FEB-1997
DEFINITION  Sequence 75 from patent US 5585258.
ACCESSION   I32190
VERSION     I32190.1  GI:1822981
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 281)
  AUTHORS   Houghton,M., Choo,Q.-L. and Kuo,G.
  TITLE     Hepatitis C virus protease
  JOURNAL   Patent: US 5585258-A 75 17-DEC-1996;
FEATURES             Location/Qualifiers
     source          1. .281
                     /organism="unknown"
                     /mol_type="unassigned DNA"
ORIGIN

  Query Match             2.7%;  Score 56;  DB 6;  Length 281;
  Best Local Similarity   100.0%;  Pred. No. 1e-21;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          4 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 59


RESULT 27
I34281
LOCUS       I34281                   281 bp    DNA     linear   PAT 06-FEB-1997
DEFINITION  Sequence 75 from patent US 5597691.
ACCESSION   I34281
VERSION     I34281.1  GI:1825072
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 281)
  AUTHORS   Houghton,M., Choo,Q.-L. and Kuo,G.
  TITLE     Hepatitis C virus protease
  JOURNAL   Patent: US 5597691-A 75 28-JAN-1997;
FEATURES             Location/Qualifiers
     source          1. .281
                     /organism="unknown"
                     /mol_type="unassigned DNA"
ORIGIN
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  Query Match             2.7%;  Score 56;  DB 6;  Length 281;
  Best Local Similarity   100.0%;  Pred. No. 1e-21;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          4 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 59


RESULT 28
I82486
LOCUS       I82486                   281 bp    DNA     linear   PAT 10-JUN-1998
DEFINITION  Sequence 75 from patent US 5712145.
ACCESSION   I82486
VERSION     I82486.1  GI:3210783
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 281)
  AUTHORS   Houghton,M., Choo,Q.-L. and Kuo,G.
  TITLE     Hepatitis C virus protease
  JOURNAL   Patent: US 5712145-A 75 27-JAN-1998;
FEATURES             Location/Qualifiers
     source          1. .281
                     /organism="unknown"
                     /mol_type="unassigned DNA"
ORIGIN

  Query Match             2.7%;  Score 56;  DB 6;  Length 281;
  Best Local Similarity   100.0%;  Pred. No. 1e-21;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          4 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 59


RESULT 29
BD140411
LOCUS       BD140411                 281 bp    DNA     linear   PAT 18-SEP-2002
DEFINITION  Hepatitis C virus protease.
ACCESSION   BD140411
VERSION     BD140411.1  GI:23235356
KEYWORDS    JP 2002051791-A/29.
SOURCE      Hepatitis C virus
  ORGANISM  Hepatitis C virus
            Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
            Hepacivirus.
REFERENCE   1  (bases 1 to 281)
  AUTHORS   Houghton,M., Choo,Q.L. and Kuo,G.
  TITLE     Hepatitis C virus protease
  JOURNAL   Patent: JP 2002051791-A 29 19-FEB-2002;
            CHIRON CORP
COMMENT     OS   HCV
            PN   JP 2002051791-A/29
            PD   19-FEB-2002
            PF   11-JUN-2001 JP 2001176369
            PR   04-APR-1990 US       505433
            PI   MICHAEL HOUGHTON,QUI LIM CHOO,GEORGE KUO
            PC   C12N15/09,C12N15/09,C12N9/50//(C12N9/50,C12R1:93),(C12N15/09,
            PC   C12R1:93),
            PC   C12N15/00,C12N15/00,(C12N15/00,C12R1:93)
            CC   Hepatitis C virus protease
            FH   Key             Location/Qualifiers
            FT   CDS             (1). .(279).
FEATURES             Location/Qualifiers
     source          1. .281
                     /organism="Hepatitis C virus"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:11103"
ORIGIN

  Query Match             2.7%;  Score 56;  DB 6;  Length 281;
  Best Local Similarity   100.0%;  Pred. No. 1e-21;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          4 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 59


RESULT 30
AR118676
LOCUS       AR118676                 283 bp    DNA     linear   PAT 16-MAY-2001
DEFINITION  Sequence 33 from patent US 6150087.
ACCESSION   AR118676
VERSION     AR118676.1  GI:14100586
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 283)
  AUTHORS   Chien,D.Y.
  TITLE     NANBV diagnostics and vaccines
  JOURNAL   Patent: US 6150087-A 33 21-NOV-2000;
FEATURES             Location/Qualifiers
     source          1. .283
                     /organism="unknown"
                     /mol_type="unassigned DNA"
ORIGIN

  Query Match             2.7%;  Score 56;  DB 6;  Length 283;
  Best Local Similarity   100.0%;  Pred. No. 1e-21;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          6 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 61


RESULT 31
I32188
LOCUS       I32188                   368 bp    DNA     linear   PAT 06-FEB-1997
DEFINITION  Sequence 71 from patent US 5585258.
ACCESSION   I32188
VERSION     I32188.1  GI:1822979
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 368)
  AUTHORS   Houghton,M., Choo,Q.-L. and Kuo,G.
  TITLE     Hepatitis C virus protease
  JOURNAL   Patent: US 5585258-A 71 17-DEC-1996;
FEATURES             Location/Qualifiers
     source          1. .368
                     /organism="unknown"
                     /mol_type="unassigned DNA"
ORIGIN

  Query Match             2.7%;  Score 56;  DB 6;  Length 368;
  Best Local Similarity   100.0%;  Pred. No. 1e-21;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        220 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 275


RESULT 32
I34279
LOCUS       I34279                   368 bp    DNA     linear   PAT 06-FEB-1997
DEFINITION  Sequence 71 from patent US 5597691.
ACCESSION   I34279
VERSION     I34279.1  GI:1825070
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KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 368)
  AUTHORS   Houghton,M., Choo,Q.-L. and Kuo,G.
  TITLE     Hepatitis C virus protease
  JOURNAL   Patent: US 5597691-A 71 28-JAN-1997;
FEATURES             Location/Qualifiers
     source          1. .368
                     /organism="unknown"
                     /mol_type="unassigned DNA"
ORIGIN

  Query Match             2.7%;  Score 56;  DB 6;  Length 368;
  Best Local Similarity   100.0%;  Pred. No. 1e-21;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        220 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 275


RESULT 33
I82484
LOCUS       I82484                 368 bp    DNA     linear   PAT 10-JUN-1998
DEFINITION  Sequence 71 from patent US 5712145.
ACCESSION   I82484
VERSION     I82484.1  GI:3210781
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 368)
  AUTHORS   Houghton,M., Choo,Q.-L. and Kuo,G.
  TITLE     Hepatitis C virus protease
  JOURNAL   Patent: US 5712145-A 71 27-JAN-1998;
FEATURES             Location/Qualifiers
     source          1. .368
                     /organism="unknown"
                     /mol_type="unassigned DNA"
ORIGIN

  Query Match             2.7%;  Score 56;  DB 6;  Length 368;
  Best Local Similarity   100.0%;  Pred. No. 1e-21;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        220 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 275


RESULT 34
BD140409
LOCUS       BD140409               368 bp    DNA     linear   PAT 18-SEP-2002
DEFINITION  Hepatitis C virus protease.
ACCESSION   BD140409
VERSION     BD140409.1  GI:23235354
KEYWORDS    JP 2002051791-A/27.
SOURCE      Hepatitis C virus
  ORGANISM  Hepatitis C virus
            Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
            Hepacivirus.
REFERENCE   1  (bases 1 to 368)
  AUTHORS   Houghton,M., Choo,Q.L. and Kuo,G.
  TITLE     Hepatitis C virus protease
  JOURNAL   Patent: JP 2002051791-A 27 19-FEB-2002;
            CHIRON CORP
COMMENT     OS   HCV
            PN   JP 2002051791-A/27
            PD   19-FEB-2002
            PF   11-JUN-2001 JP 2001176369
            PR   04-APR-1990 US       505433
            PI   MICHAEL HOUGHTON,QUI LIM CHOO,GEORGE KUO
            PC   C12N15/09,C12N15/09,C12N9/50//(C12N9/50,C12R1:93),(C12N15/09,
            PC   C12R1:93),
            PC   C12N15/00,C12N15/00,(C12N15/00,C12R1:93)
            CC   Hepatitis C virus protease
            FH   Key             Location/Qualifiers
            FT   CDS             (1). .(366).
FEATURES             Location/Qualifiers
     source          1. .368
                     /organism="Hepatitis C virus"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:11103"
ORIGIN

  Query Match             2.7%;  Score 56;  DB 6;  Length 368;
  Best Local Similarity   100.0%;  Pred. No. 1e-21;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        220 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 275


RESULT 35
AF369231
LOCUS       AF369231               543 bp    RNA     linear   VRL 03-JUL-2002
DEFINITION  Hepatitis C virus Pt.25 NS3 protease gene, partial cds.
ACCESSION   AF369231
VERSION     AF369231.1  GI:14150586
KEYWORDS    .
SOURCE      Hepatitis C virus
  ORGANISM  Hepatitis C virus
            Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
            Hepacivirus.
REFERENCE   1  (bases 1 to 543)
  AUTHORS   Holland-Staley,C.A., Kovari,L.C., Golenberg,E.M., Pobursky,K.J. and
            Mayers,D.L.
  TITLE     Genetic diversity and response to IFN of the NS3 protease gene from
            clinical strains of the hepatitis C virus
  JOURNAL   Arch. Virol. 147 (7), 1385-1406 (2002)
  MEDLINE   22105140
   PUBMED   12111414
REFERENCE   2  (bases 1 to 543)
  AUTHORS   Holland-Staley,C.A., Kovari,L.C., Golenberg,E. and Mayers,D.L.
  TITLE     Direct Submission
  JOURNAL   Submitted (09-APR-2001) Infectious Disease Research, Henry Ford
            Health Systems, 2799 W. Grand Blvd. Rm 7045 E & R, Detroit, MI
            48202, USA
FEATURES             Location/Qualifiers
     source          1. .543
                     /organism="Hepatitis C virus"
                     /mol_type="genomic RNA"
                     /isolate="Pt.25"
                     /db_xref="taxon:11103"
                     /note="type: 1A"
     CDS             <1. .>543
                     /note="polyprotein"
                     /codon_start=1
                     /product="NS3 protease"
                     /protein_id="AAK54556.1"
                     /db_xref="GI:14150587"
                     /translation="APITAYAQQTRGLLGCIITSLTGRDKNQVEGEVQIVSTAAQTFL
                     ATCINGVCWTVYHGAGTRTLASPKGPVIQMYTNVDQDLVGWVAPQGARSLTPCTCGSS
                     DLYLVTRHADVIPVRRRGDSRGSLLSPRPISYLKGSSGGPLLCPAGHAVGIFRAAVCT
                     RGVAKAVDFIPVESLETTMRS"
ORIGIN

  Query Match             2.7%;  Score 56;  DB 14;  Length 543;
  Best Local Similarity   100.0%;  Pred. No. 1e-21;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Db        289 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 344


RESULT 36
HPCNS3PROB
LOCUS       HPCNS3PROB              1284 bp ss-RNA     linear   VRL 10-JUN-1996
DEFINITION  Hepatitis C virus nonstructural (NS3) gene 5, 5' end.
ACCESSION   M62386
VERSION     M62386.1  GI:329832
KEYWORDS    nonstructural protein.
SOURCE      Hepatitis C virus
  ORGANISM  Hepatitis C virus
            Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
            Hepacivirus.
REFERENCE   1  (bases 1 to 1284)
  AUTHORS   Ogata,N., Alter,H.J., Miller,R.H. and Purcell,R.H.
  TITLE     Nucleotide sequence and mutation rate of the H strain of hepatitis
            C virus
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 88 (8), 3392-3396 (1991)
  MEDLINE   91195357
   PUBMED   1849654
COMMENT     Original source text: Hepatitis C virus RNA.
FEATURES             Location/Qualifiers
     source          1. .1284
                     /organism="Hepatitis C virus"
                     /mol_type="genomic RNA"
                     /specific_host="Patient H 1990"
                     /db_xref="taxon:11103"
     gene            1. .1284
                     /gene="NS3"
     CDS             <1. .>1284
                     /gene="NS3"
                     /codon_start=1
                     /product="polyprotein"
                     /protein_id="AAB02125.1"
                     /db_xref="GI:1303664"
                     /translation="VFTDNSSPPAVPQSFQVAHLHAPTGSGKSTKVPAAYAAQGYKVL
                     VLNPSVAATLGFGAYMSKAYGIDPSIRTGVRTITTGSPITYSTYGKFLADGGCSGGAY
                     DIIICDECHSTDATSILGIGTVLDQAETAGARLVVLATATPPGSVTVSHPNIEEVALS
                     TTGEIPFYGKAIPLGVIKGGRHLIFCHSKKKCDELAAKLVALGVNAVAYYRGLDVSVI
                     PTSGDVVVVSTDALMTGFTGDFDSVIDCNTCVTQTVDFSLDPTFTIETTTLPQDAVSR
                     TQRRGRTGRGKPGIYRFVAPGERPSGMFDSSVLCECYDAGCAWYELTPAETTVRLRAY
                     MNTPGLPVCQDHLEFWEGVFTGLTHIDAHFLSQTKQSGENFPYLVAYQATVCARAQAP
                     PPSWDQMWKCLIRLKPTLHGPTPLLYRLGAVQNEVT"
     mat_peptide     1. .>1284
                     /gene="NS3"
                     /product="nonstructural protein"
ORIGIN

  Query Match             2.7%;  Score 56;  DB 14;  Length 1284;
  Best Local Similarity   100.0%;  Pred. No. 1e-21;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        598 GTGGCCCACCTGCATGCTCCCACCGGCAGCGGTAAGAGCACCAAGGTCCCGGCCGC 653
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         49 GTGGCCCACCTGCATGCTCCCACCGGCAGCGGTAAGAGCACCAAGGTCCCGGCCGC 104


RESULT 37
AR404933
LOCUS       AR404933                2058 bp    DNA     linear   PAT 18-DEC-2003
DEFINITION  Sequence 2 from patent US 6630298.
ACCESSION   AR404933
VERSION     AR404933.1  GI:40153764
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 2058)
  AUTHORS   Chien,D.Y., Arcangel,P., Tandeske,L., George-Nascimento,C., Coit,D.
            and Medina-Selby,A.
  TITLE     HCV antigen/antibody combination assay
  JOURNAL   Patent: US 6630298-A 2 07-OCT-2003;
FEATURES             Location/Qualifiers
     source          1. .2058
                     /organism="unknown"
                     /mol_type="genomic DNA"
ORIGIN

  Query Match             2.7%;  Score 56;  DB 6;  Length 2058;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-21;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347


RESULT 38
AR408362
LOCUS       AR408362                2058 bp    DNA     linear   PAT 18-DEC-2003
DEFINITION  Sequence 1 from patent US 6632601.
ACCESSION   AR408362
VERSION     AR408362.1  GI:40158513
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 2058)
  AUTHORS   Chien,D.Y., Arcangel,P., Tandeske,L., George-Nascimento,C., Coit,D.
            and Medina-Selby,A.
  TITLE     Immunoassays for anti-HCV antibodies
  JOURNAL   Patent: US 6632601-A 1 14-OCT-2003;
FEATURES             Location/Qualifiers
     source          1. .2058
                     /organism="unknown"
                     /mol_type="genomic DNA"
ORIGIN

  Query Match             2.7%;  Score 56;  DB 6;  Length 2058;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-21;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347


RESULT 39
AX395309
LOCUS       AX395309                2058 bp    DNA     linear   PAT 18-MAY-2002
DEFINITION  Sequence 2 from Patent WO0196875.
ACCESSION   AX395309
VERSION     AX395309.1  GI:21066308
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Chien,D.Y., Arcangel,P., Tandeske,L., George-Nasciemento,C.,
            Coit,D. and Medina-Selby,A.
  TITLE     Hcv antigen/antibody combination assay
  JOURNAL   Patent: WO 0196875-A 2 20-DEC-2001;
            CHIRON CORPORATION (US)
FEATURES             Location/Qualifiers
     source          1. .2058
                     /organism="synthetic construct"
                     /mol_type="unassigned DNA"
                     /db_xref="taxon:32630"
                     /note="representative NS3/4a conformational antigen"
     CDS             1. .>2058
                     /note="unnamed protein product"
                     /codon_start=1
                     /transl_table=11
                     /protein_id="CAD32154.1"
                     /db_xref="GI:21066309"
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                     /db_xref="REMTREMBL:CAD32154"
                     /translation="MAPITAYAQQTRGLLGCIITSLTGRDKNQVEGEVQIVSTAAQTF
                     LATCINGVCWTVYHGAGTRTIASPKGPVIQMYTNVDQDLVGWPAPQGSRSLTPCTCGS
                     SDLYLVTRHADVIPVRRRGDSRGSLLSPRPISYLKGSSGGPLLCPAGHAVGIFRAAVC
                     TRGVAKAVDFIPVENLETTMRSPVFTDNSSPPVVPQSFQVAHLHAPTGSGKSTKVPAA
                     YAAQGYKVLVLNPSVAATLGFGAYMSKAHGIDPNIRTGVRTITTGSPITYSTYGKFLA
                     DGGCSGGAYDIIICDECHSTDATSILGIGTVLDQAETAGARLVVLATATPPGSVTVPH
                     PNIEEVALSTTGEIPFYGKAIPLEVIKGGRHLIFCHSKKKCDELAAKLVALGINAVAY
                     YRGLDVSVIPPIGDVVVVATDALMTGYTGDFDSVIDCNTCVTQTVDFSLDPTFTIETI
                     TLPQDAVSRTQRRGRTGRGKPGIYRFVAPGERPSGMFDSSVLCECYDAGCAWYELTPA
                     ETTVRLRAYMNTPGLPVCQDHLEFWEGVFTGLTHIDAHFLSQTKQSGENLPYLVAYQA
                     TVCARAQAPPPSWDQMWKCLIRLKPTLHGPTPLLYRLGAVQNEITLTHPVTKYIMTCM
                     SADLEVVTSTWVLVGGVLAALAAYCLSTGCVVIVGRVVLSGKPAIIPDREVLYREFDE
                     MEEC"
ORIGIN

  Query Match             2.7%;  Score 56;  DB 6;  Length 2058;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-21;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347


RESULT 40
AX454818
LOCUS       AX454818               2058 bp    DNA     linear   PAT 06-JUL-2002
DEFINITION  Sequence 1 from Patent WO0196870.
ACCESSION   AX454818
VERSION     AX454818.1  GI:21714047
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Chien,D.Y., Arcangel,P., Tandeske,L., George-Nasciemento,C.,
            Coit,D. and Medina-Selby,A.
  TITLE     Immunoassays for anti-hcv antibodies
  JOURNAL   Patent: WO 0196870-A 1 20-DEC-2001;
            CHIRON CORPORATION (US)
FEATURES             Location/Qualifiers
     source          1. .2058
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                     /mol_type="unassigned DNA"
                     /db_xref="taxon:32630"
                     /note="representative NS3/4a conformational antigen"
     CDS             1. .>2058
                     /note="unnamed protein product"
                     /codon_start=1
                     /transl_table=11
                     /protein_id="CAD38232.1"
                     /db_xref="GI:21714048"
                     /db_xref="REMTREMBL:CAD38232"
                     /translation="MAPITAYAQQTRGLLGCIITSLTGRDKNQVEGEVQIVSTAAQTF
                     LATCINGVCWTVYHGAGTRTIASPKGPVIQMYTNVDQDLVGWPAPQGSRSLTPCTCGS
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                     TRGVAKAVDFIPVENLETTMRSPVFTDNSSPPVVPQSFQVAHLHAPTGSGKSTKVPAA
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                     YRGLDVSVIPPIGDVVVVATDALMTGYTGDFDSVIDCNTCVTQTVDFSLDPTFTIETI
                     TLPQDAVSRTQRRGRTGRGKPGIYRFVAPGERPSGMFDSSVLCECYDAGCAWYELTPA
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ORIGIN

  Query Match             2.7%;  Score 56;  DB 6;  Length 2058;
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Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
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RESULT 41
I32187
LOCUS       I32187                 2064 bp    DNA     linear   PAT 06-FEB-1997
DEFINITION  Sequence 69 from patent US 5585258.
ACCESSION   I32187
VERSION     I32187.1  GI:1822978
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 2064)
  AUTHORS   Houghton,M., Choo,Q.-L. and Kuo,G.
  TITLE     Hepatitis C virus protease
  JOURNAL   Patent: US 5585258-A 69 17-DEC-1996;
FEATURES             Location/Qualifiers
     source          1. .2064
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                     /mol_type="unassigned DNA"
ORIGIN

  Query Match             2.7%;  Score 56;  DB 6;  Length 2064;
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  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 596


RESULT 42
I34278
LOCUS       I34278                 2064 bp    DNA     linear   PAT 06-FEB-1997
DEFINITION  Sequence 69 from patent US 5597691.
ACCESSION   I34278
VERSION     I34278.1  GI:1825069
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 2064)
  AUTHORS   Houghton,M., Choo,Q.-L. and Kuo,G.
  TITLE     Hepatitis C virus protease
  JOURNAL   Patent: US 5597691-A 69 28-JAN-1997;
FEATURES             Location/Qualifiers
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                     /mol_type="unassigned DNA"
ORIGIN

  Query Match             2.7%;  Score 56;  DB 6;  Length 2064;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-21;
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Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 596


RESULT 43
I82483
LOCUS       I82483                 2064 bp    DNA     linear   PAT 10-JUN-1998
DEFINITION  Sequence 69 from patent US 5712145.
ACCESSION   I82483
VERSION     I82483.1  GI:3210780
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
```

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REFERENCE   1  (bases 1 to 2064)
  AUTHORS   Houghton,M., Choo,Q.-L. and Kuo,G.
  TITLE     Hepatitis C virus protease
  JOURNAL   Patent: US 5712145-A 69 27-JAN-1998;
FEATURES             Location/Qualifiers
     source          1. .2064
                     /organism="unknown"
                     /mol_type="unassigned DNA"
ORIGIN

  Query Match             2.7%;  Score 56;  DB 6;  Length 2064;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-21;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 596


RESULT 44
BD140408
LOCUS       BD140408                2064 bp    DNA     linear   PAT 18-SEP-2002
DEFINITION  Hepatitis C virus protease.
ACCESSION   BD140408
VERSION     BD140408.1  GI:23235353
KEYWORDS    JP 2002051791-A/26.
SOURCE      Hepatitis C virus
  ORGANISM  Hepatitis C virus
            Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
            Hepacivirus.
REFERENCE   1  (bases 1 to 2064)
  AUTHORS   Houghton,M., Choo,Q.L. and Kuo,G.
  TITLE     Hepatitis C virus protease
  JOURNAL   Patent: JP 2002051791-A 26 19-FEB-2002;
            CHIRON CORP
COMMENT     OS   HCV
            PN   JP 2002051791-A/26
            PD   19-FEB-2002
            PF   11-JUN-2001 JP 2001176369
            PR   04-APR-1990 US       505433
            PI   MICHAEL HOUGHTON,QUI LIM CHOO,GEORGE KUO
            PC   C12N15/09,C12N15/09,C12N9/50//(C12N9/50,C12R1:93),(C12N15/09,
            PC   C12R1:93),
            PC   C12N15/00,C12N15/00,(C12N15/00,C12R1:93)
            CC   Hepatitis C virus protease
            FH   Key             Location/Qualifiers
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FEATURES             Location/Qualifiers
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                     /mol_type="genomic DNA"
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ORIGIN

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Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
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Db        541 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 596


RESULT 45
BD140416
LOCUS       BD140416                2283 bp    DNA     linear   PAT 18-SEP-2002
DEFINITION  Hepatitis C virus protease.
ACCESSION   BD140416
VERSION     BD140416.1  GI:23235361
KEYWORDS    JP 2002051791-A/34..
SOURCE      Hepatitis C virus
  ORGANISM  Hepatitis C virus
            Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
            Hepacivirus.
REFERENCE   1  (bases 1 to 2283)
  AUTHORS   Houghton,M., Choo,Q.L. and Kuo,G.
  TITLE     Hepatitis C virus protease
  JOURNAL   Patent: JP 2002051791-A 34 19-FEB-2002;
            CHIRON CORP
COMMENT     OS   HCV
            PN   JP 2002051791-A/34
            PD   19-FEB-2002
            PF   11-JUN-2001 JP 2001176369
            PR   04-APR-1990 US       505433
            PI   MICHAEL HOUGHTON,QUI LIM CHOO,GEORGE KUO
            PC   C12N15/09,C12N15/09,C12N9/50//(C12N9/50,C12R1:93),(C12N15/09,
            PC   C12R1:93),
            PC   C12N15/00,C12N15/00,(C12N15/00,C12R1:93)
            CC   Hepatitis C virus protease
            FH   Key             Location/Qualifiers
            FT   CDS             (1). .(2283)
            FT   mat_peptide     (466).
FEATURES             Location/Qualifiers
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                     /mol_type="genomic DNA"
                     /db_xref="taxon:11103"
ORIGIN

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Db       1000 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 1055


RESULT 46
I32195
LOCUS       I32195                  2523 bp    DNA     linear   PAT 06-FEB-1997
DEFINITION  Sequence 85 from patent US 5585258.
ACCESSION   I32195
VERSION     I32195.1  GI:1822986
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 2523)
  AUTHORS   Houghton,M., Choo,Q.-L. and Kuo,G.
  TITLE     Hepatitis C virus protease
  JOURNAL   Patent: US 5585258-A 85 17-DEC-1996;
FEATURES             Location/Qualifiers
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                     /mol_type="unassigned DNA"
ORIGIN

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Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1000 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 1055


RESULT 47
I34286
LOCUS       I34286                  2523 bp    DNA     linear   PAT 06-FEB-1997
DEFINITION  Sequence 85 from patent US 5597691.
ACCESSION   I34286
VERSION     I34286.1  GI:1825077
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
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            Unclassified.
REFERENCE   1  (bases 1 to 2523)
  AUTHORS   Houghton,M., Choo,Q.-L. and Kuo,G.
  TITLE     Hepatitis C virus protease
  JOURNAL   Patent: US 5597691-A 85 28-JAN-1997;
FEATURES             Location/Qualifiers
     source          1. .2523
                     /organism="unknown"
                     /mol_type="unassigned DNA"
ORIGIN

  Query Match             2.7%;  Score 56;  DB 6;  Length 2523;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-21;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1000 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 1055


RESULT 48
I82491
LOCUS       I82491                  2523 bp    DNA     linear   PAT 10-JUN-1998
DEFINITION  Sequence 85 from patent US 5712145.
ACCESSION   I82491
VERSION     I82491.1  GI:3210788
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 2523)
  AUTHORS   Houghton,M., Choo,Q.-L. and Kuo,G.
  TITLE     Hepatitis C virus protease
  JOURNAL   Patent: US 5712145-A 85 27-JAN-1998;
FEATURES             Location/Qualifiers
     source          1. .2523
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ORIGIN

  Query Match             2.7%;  Score 56;  DB 6;  Length 2523;
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  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
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Db       1000 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 1055


RESULT 49
AR118686
LOCUS       AR118686                5360 bp    DNA     linear   PAT 16-MAY-2001
DEFINITION  Sequence 53 from patent US 6150087.
ACCESSION   AR118686
VERSION     AR118686.1  GI:14100596
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 5360)
  AUTHORS   Chien,D.Y.
  TITLE     NANBV diagnostics and vaccines
  JOURNAL   Patent: US 6150087-A 53 21-NOV-2000;
FEATURES             Location/Qualifiers
     source          1. .5360
                     /organism="unknown"
                     /mol_type="unassigned DNA"
ORIGIN

  Query Match             2.7%;  Score 56;  DB 6;  Length 5360;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-21;
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Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
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RESULT 50
I06434
LOCUS       I06434                  5360 bp    DNA     linear   PAT 02-DEC-1994
DEFINITION  Sequence 48 from Patent EP 0318216.
ACCESSION   I06434
VERSION     I06434.1  GI:590311
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 5360)
  AUTHORS   Houghton,M., Choo,Q.-L. and Kuo,G.
  TITLE     Nanbv diagnostics and vaccines
  JOURNAL   Patent: EP 0318216-A1 48 31-MAY-1989;
FEATURES             Location/Qualifiers
     source          1. .5360
                     /organism="unknown"
                     /mol_type="unassigned DNA"
ORIGIN

  Query Match             2.7%;  Score 56;  DB 6;  Length 5360;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-21;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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GenCore version 5.1.6

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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5	62	3.0	943	2	AAX84003	Aax84003 HCV E1 co
6	62	3.0	943	2	AAX16760	Aax16760 Hepatitis
7	62	3.0	7983	9	ADD93727	Add93727 Hepatitis
8	62	3.0	9365	6	AAD25518	Aad25518 Hepatitis
9	61	3.0	957	3	AAZ36164	Aaz36164 Nucleotid
10	58	2.8	382	2	AAQ38233	Aaq38233 pHCV-108
11	58	2.8	382	5	AAF32234	Aaf32234 HCV recom
12	58	2.8	1414	2	AAQ38232	Aaq38232 CKS-HCV a
13	58	2.8	1414	5	AAF32233	Aaf32233 HCV recom
14	58	2.8	1420	2	AAQ38234	Aaq38234 Clone pHC
15	58	2.8	1420	5	AAF32235	Aaf32235 HCV recom
16	56	2.7	281	2	AAQ14299	Aaq14299 Hepatitis
17	56	2.7	281	2	AAQ14361	Aaq14361 Clone C8h
18	56	2.7	281	2	AAT59255	Aat59255 HCV prote
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20	56	2.7	281	2	AAX26393	Aax26393 Nucleotid
21	56	2.7	281	8	ACD44791	Acd44791 Hepatitis
22	56	2.7	281	8	ADA07864	Ada07864 Hepatitis
23	56	2.7	282	1	AAN90317	Aan90317 Hepatitis
24	56	2.7	282	2	AAQ80170	Aaq80170 Hepatitis
25	56	2.7	283	1	AAN92087	Aan92087 Sequence
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27	56	2.7	368	2	AAQ14359	Aaq14359 Clone C20
28	56	2.7	368	2	AAQ80168	Aaq80168 Hepatitis
29	56	2.7	368	2	AAT59254	Aat59254 HCV prote
30	56	2.7	368	2	AAV04986	Aav04986 Nucleotid
31	56	2.7	368	2	AAX26391	Aax26391 Nucleotid
32	56	2.7	368	8	ACD44789	Acd44789 Hepatitis
33	56	2.7	368	8	ADA07860	Ada07860 Hepatitis
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35	56	2.7	1947	2	AAQ14304	Aaq14304 Vector cf
36	56	2.7	2058	6	ABK15344	Abk15344 Hepatitis
37	56	2.7	2058	6	AAD29795	Aad29795 HCV-1 NS3
38	56	2.7	2058	7	ABX14410	Abx14410 DNA encod
39	56	2.7	2058	9	ADC06768	Adc06768 HCV mutan
40	56	2.7	2064	2	AAQ14296	Aaq14296 Hepatitis
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50	56	2.7	2523	2	AAT59261	Aat59261 cf1SODp60
51	56	2.7	2523	2	AAV04993	Aav04993 Nucleotid
52	56	2.7	2523	2	AAX26398	Aax26398 Nucleotid
53	56	2.7	2523	8	ACD44796	Acd44796 Hepatitis
54	56	2.7	2523	8	ADA07874	Ada07874 Sequence
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57	56	2.7	6299	4	AAF83669	Aaf83669 HCV NS34A
58	56	2.7	6905	1	AAN92103	Aan92103 Combined
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60	56	2.7	7310	1	AAN90336	Aan90336 Composite
61	56	2.7	7310	2	AAQ98221	Aaq98221 Hepatitis
62	56	2.7	8316	2	AAQ05955	Aaq05955 Hepatitis
63	56	2.7	8316	3	AAA75296	Aaa75296 cDNA sequ
64	56	2.7	9133	2	AAZ07656	Aaz07656 Nucleotid
65	56	2.7	9185	2	AAQ05956	Aaq05956 Sense str
66	56	2.7	9185	2	AAQ10566	Aaq10566 Hepatitis
67	56	2.7	9185	2	AAX00459	Aax00459 Hepatitis
68	56	2.7	9185	2	AAX26737	Aax26737 Nucleotid
69	56	2.7	9185	3	AAA75297	Aaa75297 Sense str
70	56	2.7	9400	2	AAQ21744	Aaq21744 Compiled
71	56	2.7	9401	2	AAT12710	Aat12710 Hepatitis
72	56	2.7	9401	2	AAT99981	Aat99981 HCV polyp
73	56	2.7	9401	2	AAV09989	Aav09989 HCV polyp
74	56	2.7	9401	6	AAD35043	Aad35043 Hepatitis
75	53	2.6	475	6	ABL55592	Abl55592 HCV bait
76	53	2.6	583	6	ABL55594	Abl55594 HCV bait
77	53	2.6	790	6	ABL55593	Abl55593 HCV bait
78	53	2.6	836	6	ABL55591	Abl55591 HCV bait
79	53	2.6	7989	9	ADD93722	Add93722 Hepatitis
80	53	2.6	7992	9	ADD93723	Add93723 Hepatitis
81	53	2.6	9416	2	AAQ22871	Aaq22871 NANBV Hut
82	53	2.6	9416	6	AAD31764	Aad31764 Hepatitis
83	53	2.6	9416	9	AAD60865	Aad60865 Hepatitis
84	53	2.6	9518	5	AAD03778	Aad03778 Hepatitis
85	53	2.6	9518	5	AAD03808	Aad03808 Hepatitis
86	53	2.6	9518	5	AAD03807	Aad03807 Hepatitis
87	53	2.6	9599	2	AAX24833	Aax24833 Infectiou
88	53	2.6	9599	2	AAX24832	Aax24832 Infectiou
89	53	2.6	9599	4	AAF23491	Aaf23491 Infectiou
90	53	2.6	9599	4	AAC86938	Aac86938 Nucleotid
91	53	2.6	9611	5	AAC86646	Aac86646 Nucleotid
92	53	2.6	9611	5	AAC86645	Aac86645 Nucleotid
93	53	2.6	9611	5	AAC86647	Aac86647 Nucleotid
94	53	2.6	9611	5	AAC86648	Aac86648 Nucleotid
95	53	2.6	9646	2	AAV59361	Aav59361 Hepatitis
96	53	2.6	9646	6	ABK87285	Abk87285 cDNA enco

97	53	2.6	9646	7	ACA62466	Aca62466 HCV H77 c
98	53	2.6	10803	7	ABX10617	Abx10617 MKO-Z nuc
99	53	2.6	10803	9	ADD67945	Add67945 Modified
100	53	2.6	12980	2	AAV59364	Aav59364 Hepatitis
101	53	2.6	12980	6	ABK87286	Abk87286 Hepatitis
102	53	2.6	12980	7	ACA62469	Aca62469 DNA encod
103	53	2.6	16622	3	AAZ36212	Aaz36212 Nucleotid
104	52	2.5	885	2	AAT12543	Aat12543 NS3 regio
105	52	2.5	885	8	ACC85400	Acc85400 Hepatitis
106	50	2.4	337	6	ABL55575	Abl55575 Selected
107	50	2.4	373	3	AAA55443	Aaa55443 Hepatitis
108	50	2.4	442	6	ABL55563	Abl55563 Selected
109	50	2.4	559	6	ABL55596	Abl55596 HCV bait
110	50	2.4	617	6	ABL55595	Abl55595 HCV bait
111	50	2.4	1251	2	AAQ38274	Aaq38274 HCV CKS-N
112	50	2.4	1251	2	AAQ38259	Aaq38259 HCV CKS-N
113	50	2.4	1251	2	AAQ38244	Aaq38244 HCV CKS-N
114	50	2.4	1251	5	AAF32227	Aaf32227 HCV recom
115	50	2.4	1254	2	AAQ21686	Aaq21686 pHCV-105
116	48	2.3	5211	4	AAC83408	Aac83408 DNA encod
117	48	2.3	9436	2	AAQ63499	Aaq63499 Blood tra
118	47	2.3	9502	2	AAQ74770	Aaq74770 Hepatitis
119	44	2.1	492	1	AAN92083	Aan92083 Sequence
120	44	2.1	492	1	AAN90313	Aan90313 Hepatitis
121	44	2.1	669	6	AAL43920	Aal43920 Hepatitis
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124	44	2.1	800	1	AAN90316	Aan90316 Hepatitis
125	44	2.1	816	2	AAQ14303	Aaq14303 Hepatitis
126	44	2.1	816	2	AAQ14365	Aaq14365 Clone C33
127	44	2.1	816	2	AAQ80174	Aaq80174 Hepatitis
128	44	2.1	816	2	AAT59250	Aat59250 HCV prote
129	44	2.1	816	2	AAV04992	Aav04992 Nucleotid
130	44	2.1	816	2	AAX26397	Aax26397 Nucleotid
131	44	2.1	816	8	ACD44795	Acd44795 Hepatitis
132	44	2.1	816	8	ADA07872	Ada07872 Hepatitis
133	44	2.1	2055	2	AAV54955	Aav54955 Partial s
134	44	2.1	2499	6	AAD29796	Aad29796 Multiple
135	44	2.1	2499	9	ADC06770	Adc06770 Chimeric
136	44	2.1	2579	1	AAN92085	Aan92085 Open read
137	44	2.1	2579	1	AAN90315	Aan90315 Hepatitis
138	44	2.1	3075	2	AAT99982	Aat99982 HCV antig
139	44	2.1	3075	2	AAV09990	Aav09990 Fusion pr
140	44	2.1	3075	6	AAD35044	Aad35044 pSOD/c200
141	44	2.1	3297	6	ABK15345	Abk15345 HCV multi
142	44	2.1	3297	7	ABX14411	Abx14411 DNA encod
143	44	2.1	6609	7	AAL54423	Aal54423 Hepatitis
144	44	2.1	8451	7	AAL54425	Aal54425 Hepatitis
145	44	2.1	9379	2	AAQ36209	Aaq36209 Composite
146	44	2.1	9401	2	AAT41882	Aat41882 Hepatitis
147	44	2.1	9416	2	AAV59378	Aav59378 Hepatitis
148	44	2.1	9416	6	ABK87300	Abk87300 cDNA enco
149	44	2.1	9416	7	ACA62483	Aca62483 HCV-H cDN
150	44	2.1	9472	2	AAQ33282	Aaq33282 Korean he
151	44	2.1	9620	4	AAF83667	Aaf83667 HCV delNS
152	44	2.1	9620	4	AAF83666	Aaf83666 HCV NS35
153	44	2.1	9622	7	AAL54424	Aal54424 Hepatitis
154	44	2.1	19798	4	AAF83671	Aaf83671 Nucleic a
155	44	2.1	19912	4	AAF83670	Aaf83670 Nucleic a
156	44	2.1	20160	4	AAF83672	Aaf83672 Nucleic a
157	44	2.1	20217	4	AAF83674	Aaf83674 Nucleic a
158	44	2.1	20247	4	AAF83675	Aaf83675 Nucleic a
159	44	2.1	20316	4	AAF83673	Aaf83673 Nucleic a
160	43	2.1	347	1	AAN92088	Aan92088 Sequence
161	43	2.1	347	1	AAN90318	Aan90318 Hepatitis
162	43	2.1	2777	2	AAT03985	Aat03985 HCV parti
163	41	2.0	268	1	AAN92081	Aan92081 Sequence
164	41	2.0	268	1	AAN90311	Aan90311 Hepatitis
165	41	2.0	308	2	AAQ14301	Aaq14301 Hepatitis
166	41	2.0	308	2	AAQ14363	Aaq14363 Clone C31
167	41	2.0	308	2	AAQ80172	Aaq80172 Hepatitis
168	41	2.0	308	2	AAT59252	Aat59252 HCV prote
169	41	2.0	308	2	AAV04990	Aav04990 Nucleotid
170	41	2.0	308	2	AAX26395	Aax26395 Nucleotid
171	41	2.0	308	8	ACD44793	Acd44793 Hepatitis
172	41	2.0	308	8	ADA07868	Ada07868 Hepatitis
173	41	2.0	477	2	AAQ14277	Aaq14277 HCV Clone
174	41	2.0	477	2	AAQ98205	Aaq98205 Hepatitis
175	41	2.0	477	2	AAV70802	Aav70802 Insert of
176	41	2.0	477	2	AAV70548	Aav70548 Insert of
177	41	2.0	480	1	AAN92079	Aan92079 Sequence
178	41	2.0	480	1	AAN90309	Aan90309 Hepatitis
179	41	2.0	480	2	AAQ10567	Aaq10567 Hepatitis
180	41	2.0	495	2	AAQ14302	Aaq14302 Hepatitis
181	41	2.0	495	2	AAQ14364	Aaq14364 Clone C35
182	41	2.0	495	2	AAQ80173	Aaq80173 Hepatitis
183	41	2.0	495	2	AAT59251	Aat59251 HCV prote
184	41	2.0	495	2	AAV04991	Aav04991 Nucleotid
185	41	2.0	495	2	AAX26396	Aax26396 Nucleotid
186	41	2.0	495	8	ACD44794	Acd44794 Hepatitis
187	41	2.0	495	8	ADA07870	Ada07870 Hepatitis
188	41	2.0	558	2	AAQ14278	Aaq14278 HCV Clone
189	41	2.0	558	2	AAQ98206	Aaq98206 Hepatitis
190	41	2.0	558	2	AAV70803	Aav70803 Insert of
191	41	2.0	558	2	AAV70549	Aav70549 Insert of
192	41	2.0	1382	1	AAN92080	Aan92080 Combined
193	41	2.0	1382	1	AAN90310	Aan90310 Hepatitis
194	41	2.0	1495	2	AAX26741	Aax26741 Consensus
195	41	2.0	1523	2	AAQ79774	Aaq79774 HCV J1 NS
196	41	2.0	1539	2	AAZ07660	Aaz07660 HCV J1 NS
197	41	2.0	1933	2	AAX23258	Aax23258 HCV NS3 D
198	41	2.0	7659	2	AAX23260	Aax23260 Plasmid p
199	41	2.0	8145	2	AAX23259	Aax23259 Plasmid p
200	38	1.8	9391	2	AAQ38959	Aaq38959 Hepatitis
201	38	1.8	9391	2	AAQ64175	Aaq64175 NANBHV E1
202	38	1.8	9487	2	AAQ79140	Aaq79140 Hepatitis
203	36	1.7	85	6	ABL55559	Abl55559 Selected
204	35	1.7	267	2	AAQ58473	Aaq58473 HCV pepti
205	35	1.7	390	6	ABL55598	Abl55598 HCV bait
206	35	1.7	453	6	ABL55551	Abl55551 Selected
207	35	1.7	475	6	ABL55597	Abl55597 HCV bait
208	35	1.7	623	2	AAQ14351	Aaq14351 Hepatitis
209	35	1.7	2093	2	AAQ70541	Aaq70541 Hepatitis

ALIGNMENTS

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RESULT 1
AAD34500
ID   AAD34500 standard; DNA; 2061 BP.
XX
AC   AAD34500;
XX
DT   16-JUL-2002  (first entry)
XX
DE   Hepatitis C virus NS3/4A protein encoding DNA.
XX
KW   Hepatitis C virus; HCV; NS3/4A protein; therapy; HCV infection; vaccine;
KW   virucide; gene; ds.
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OS   Hepatitis C virus.
XX
FH   Key             Location/Qualifiers
FT   CDS             1. .2061
FT                   /*tag=  a
FT                   /product= "HCV NS3/4A protein"
XX
PN   WO200214362-A2.
XX
PD   21-FEB-2002.
XX
PF   15-AUG-2001; 2001WO-IB001774.
XX
PR   17-AUG-2000; 2000US-0225767P.
PR   29-AUG-2000; 2000US-0229175P.
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PR 03-NOV-2000; 2000US-00705547.
XX
PA (TRIP-) TRIPEP AB.
XX
PI Sallberg M;
XX
DR WPI; 2002-339446/37.
DR P-PSDB; AAE21837.
XX
PT Novel hepatitis C virus NS3/4A peptide useful for diagnosing presence or
PT absence of hepatitis C virus in a subject and for preparing a medicament
PT for treating hepatitis C virus infection.
XX
PS Claim 1; Page 64-65; 90pp; English.
XX
CC The present invention relates to novel hepatitis C virus (HCV) NS3/4A
CC proteins and their corresponding polynucleotides. NS3/4A sequences are
CC useful for identifying the presence or absence HCV in a subject. They are
CC useful for preparing a medicament used for treating or preventing HCV
CC infection. Sequences of the invention are also used as vaccines. The
CC present sequence is a DNA encoding HCV NS3/4A protein
XX
SQ Sequence 2061 BP; 427 A; 616 C; 571 G; 447 T; 0 U; 0 Other;

Query Match 100.0%; Score 2061; DB 6; Length 2061;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 2061; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 ATGGCGCCTATCACGGCCTATGCCCAGCAGACAAGGGGCCTTTTGGGATGCATAATCACC 60
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Db          1 ATGGCGCCTATCACGGCCTATGCCCAGCAGACAAGGGGCCTTTTGGGATGCATAATCACC 60

Qy         61 AGCTTGACCGGCCGGGACAAAAACCAGGTGGAGGGTGAGGTTCAGATCGTGTCAACTGCT 120
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Db         61 AGCTTGACCGGCCGGGACAAAAACCAGGTGGAGGGTGAGGTTCAGATCGTGTCAACTGCT 120

Qy        121 GCCCAGACTTTCTTGGCAACCTGCATTAACGGGGTGTGTTGGACTGTCTACCATGGAGCC 180
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Db        121 GCCCAGACTTTCTTGGCAACCTGCATTAACGGGGTGTGTTGGACTGTCTACCATGGAGCC 180

Qy        181 GGAACAAGGACCATTGCGTCACCTAAGGGTCCTGTTATCCAGATGTACACCAATGTGGAC 240
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Qy        301 GGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCCTGTGCGCCGACGG 360
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Qy        361 GGTGATGGCAGGGGCAGCCTGCTTTCGCCCCGGCCTATCTCTTACTTGAAAGGCTCCTCG 420
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Qy        721 GCTTACATGTCCAAGGCCCATGGGATTGATCCTAACATCAGGACTGGGGTGAGGACAATT 780
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Qy        841 TCAGGGGGTGCTTATGACATAATAATTTGTGACGAGTGCCACTCCACGGATGCAACATCC 900
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Qy        901 ATCTTGGGCATTGGCACTGTCCTTGACCAAGCAGAGACCGCGGGGGCGAGACTGACTGTG 960
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Qy       1021 GCTCTGTCCACTACCGGAGAGATCCCCTTTTATGGCAAGGCTATTCCCCTTGAAGCAATT 1080
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Qy       2041 GATGAAATGGAAGAGTGCTGA 2061
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Db       2041 GATGAAATGGAAGAGTGCTGA 2061
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RESULT 2
AAD31767
ID AAD31767 standard; DNA; 2061 BP.
XX
AC AAD31767;
XX
DT 18-JUN-2002 (first entry)
XX
DE Hepatitis C virus (HCV) NS3/4A DNA coding region.
XX
KW Hepatitis C virus; HCV infection; virucide; fungicide; antibacterial;
KW cytostatic; immunostimulant; vaccine; ribavirin; immune response; cancer;
KW ds.
XX
OS Hepatitis C virus.
XX
FH Key   Location/Qualifiers
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PN WO200213855-A2.
XX
PD 21-FEB-2002.
XX
PF 15-AUG-2001; 2001WO-IB001808.
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PR 17-AUG-2000; 2000US-0225767P.
PR 29-AUG-2000; 2000US-0229175P.
PR 03-NOV-2000; 2000US-00705547.
XX
PA (TRIP-) TRIPEP AB.
XX
PI Sallberg M, Hultgren C;
XX
DR WPI; 2002-241837/29.
DR P-PSDB; AAE19900.
XX
PT Vaccine compositions for treating and preventing disease, preferably
PT hepatitis C virus infection, comprises ribavirin and antigen that has
PT epitope present in hepatitis C virus.
XX
PS Claim 1; Page 94-95; 120pp; English.
XX
CC The invention relates to a composition comprising ribavirin and an
CC antigen preferably non structural 3 protein (NS3)/4A fragment of
CC hepatitis C virus (HCV) genome or a peptide or nucleic acid of HCV
CC sequence. The composition is useful for enhancing an immune response to a
CC hepatitis C antigen in humans, domestic, sport or pet species and as
CC vaccines for treating and preventing HCV infections. The composition is
CC also useful for treating viral, bacterial, fungal diseases and cancer.
CC The present sequence is HCV NS3/4A DNA coding region
XX
SQ Sequence 2061 BP; 427 A; 616 C; 571 G; 447 T; 0 U; 0 Other;

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  Query Match             100.0%;  Score 2061;  DB 6;  Length 2061;
  Best Local Similarity   100.0%;  Pred. No. 0;
  Matches 2061;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 ATGGCGCCTATCACGGCCTATGCCCAGCAGACAAGGGGCCTTTTGGGATGCATAATCACC 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 ATGGCGCCTATCACGGCCTATGCCCAGCAGACAAGGGGCCTTTTGGGATGCATAATCACC 60

Qy         61 AGCTTGACCGGCCGGGACAAAAACCAGGTGGAGGGTGAGGTTCAGATCGTGTCAACTGCT 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 AGCTTGACCGGCCGGGACAAAAACCAGGTGGAGGGTGAGGTTCAGATCGTGTCAACTGCT 120

Qy        121 GCCCAGACTTTCTTGGCAACCTGCATTAACGGGGTGTGTTGGACTGTCTACCATGGAGCC 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 GCCCAGACTTTCTTGGCAACCTGCATTAACGGGGTGTGTTGGACTGTCTACCATGGAGCC 180

Qy        181 GGAACAAGGACCATTGCGTCACCTAAGGGTCCTGTTATCCAGATGTACACCAATGTGGAC 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 GGAACAAGGACCATTGCGTCACCTAAGGGTCCTGTTATCCAGATGTACACCAATGTGGAC 240

Qy        241 CAAGACCTCGTAGGCTGGCCCGCTCCCCAAGGTGCCCGCTCATTAACACCATGCACTTGC 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 CAAGACCTCGTAGGCTGGCCCGCTCCCCAAGGTGCCCGCTCATTAACACCATGCACTTGC 300

Qy        301 GGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCCTGTGCGCCGACGG 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 GGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCCTGTGCGCCGACGG 360

Qy        361 GGTGATGGCAGGGGCAGCCTGCTTTCGCCCCGGCCTATCTCTTACTTGAAAGGCTCCTCG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 GGTGATGGCAGGGGCAGCCTGCTTTCGCCCCGGCCTATCTCTTACTTGAAAGGCTCCTCG 420

Qy        421 GGAGGCCCTCTGCTGTGCCCCGCAGGACATGCCGTAGGCATATTCAGAGCCGCGGTATGC 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 GGAGGCCCTCTGCTGTGCCCCGCAGGACATGCCGTAGGCATATTCAGAGCCGCGGTATGC 480

Qy        481 ACCCGTGGAGTGGCTAAGGCGGTGGACTTCATCCCCGTAGAGAGCTTAGAGACAACCATG 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 ACCCGTGGAGTGGCTAAGGCGGTGGACTTCATCCCCGTAGAGAGCTTAGAGACAACCATG 540

Qy        541 AGGTCCCCGGTGTTCTCAGACAACTCCTCCCCACCAGCAGTGCCCCAGAGCTACCAAGTG 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 AGGTCCCCGGTGTTCTCAGACAACTCCTCCCCACCAGCAGTGCCCCAGAGCTACCAAGTG 600

Qy        601 GCCCACCTGCATGCTCCCACCGGCAGCGGTAAGAGCACCAAGGTCCCGGCCGCATACGCA 660
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 GCCCACCTGCATGCTCCCACCGGCAGCGGTAAGAGCACCAAGGTCCCGGCCGCATACGCA 660

Qy        661 GCTCAGGGCTACAAGGTGCTGGTGCTCAACCCCTCCGTTGCTGCAACAATGGGCTTTGGT 720
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        661 GCTCAGGGCTACAAGGTGCTGGTGCTCAACCCCTCCGTTGCTGCAACAATGGGCTTTGGT 720

Qy        721 GCTTACATGTCCAAGGCCCATGGGATTGATCCTAACATCAGGACTGGGGTGAGGACAATT 780
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        721 GCTTACATGTCCAAGGCCCATGGGATTGATCCTAACATCAGGACTGGGGTGAGGACAATT 780

Qy        781 ACTACTGGCAGCCCGATCACGTATTCCACCTACGGCAAGTTCCTTGCCGACGGCGGGTGT 840
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        781 ACTACTGGCAGCCCGATCACGTATTCCACCTACGGCAAGTTCCTTGCCGACGGCGGGTGT 840

Qy        841 TCAGGGGGTGCTTATGACATAATAATTTTGTGACGAGTGCCACTCCACGGATGCAACATCC 900
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        841 TCAGGGGGTGCTTATGACATAATAATTTTGTGACGAGTGCCACTCCACGGATGCAACATCC 900

Qy        901 ATCTTGGGCATTGGCACTGTCCTTGACCAAGCAGAGACCGCGGGGGCGAGACTGACTGTG 960
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        901 ATCTTGGGCATTGGCACTGTCCTTGACCAAGCAGAGACCGCGGGGGCGAGACTGACTGTG 960
```

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Qy       961 CTCGCCACCGCTACCCCTCCGGGCTCCGTCACTGTGCCCCATCCTAACATCGAGGAGGTT 1020
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       961 CTCGCCACCGCTACCCCTCCGGGCTCCGTCACTGTGCCCCATCCTAACATCGAGGAGGTT 1020

Qy      1021 GCTCTGTCCACTACCGGAGAGATCCCCTTTTATGGCAAGGCTATTCCCCTTGAAGCAATT 1080
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1021 GCTCTGTCCACTACCGGAGAGATCCCCTTTTATGGCAAGGCTATTCCCCTTGAAGCAATT 1080

Qy      1081 AAGGGGGGGAGACATCTCATCTTCTGCCACTCAAAGAAGAAGTGCGACGAGCTCGCCGCA 1140
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1081 AAGGGGGGGAGACATCTCATCTTCTGCCACTCAAAGAAGAAGTGCGACGAGCTCGCCGCA 1140

Qy      1141 AAACTGGTCGCGTTGGGCGTCAATGCCGTGGCTTACTACCGCGGCCTTGATGTGTCCGTC 1200
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1141 AAACTGGTCGCGTTGGGCGTCAATGCCGTGGCTTACTACCGCGGCCTTGATGTGTCCGTC 1200

Qy      1201 ATCCCGACCAGTGGTGACGTTGTCGTCGTGGCAACTGACGCCCTCATGACCGGCTTTACC 1260
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1201 ATCCCGACCAGTGGTGACGTTGTCGTCGTGGCAACTGACGCCCTCATGACCGGCTTTACC 1260

Qy      1261 GGCGACTTCGATTCGGTGATAGACTGCAACACGTGTGTCACCCAGACAGTCGACTTCAGC 1320
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1261 GGCGACTTCGATTCGGTGATAGACTGCAACACGTGTGTCACCCAGACAGTCGACTTCAGC 1320

Qy      1321 CTTGACCCTACCTTCACCATTGAGACAATCACGCTTCCCCAGGATGCTGTCTCCCGTACT 1380
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1321 CTTGACCCTACCTTCACCATTGAGACAATCACGCTTCCCCAGGATGCTGTCTCCCGTACT 1380

Qy      1381 CAACGTCGGGGTAGGACTGGCAGAGGGAAGCCAGGCATCTACAGATTTGTGGCACCGGGG 1440
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1381 CAACGTCGGGGTAGGACTGGCAGAGGGAAGCCAGGCATCTACAGATTTGTGGCACCGGGG 1440

Qy      1441 GAGCGTCCTTCTGGCATGTTTGACTCGTCTGTCCTCTGCGAGTGCTATGACGCGGGTTGT 1500
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1441 GAGCGTCCTTCTGGCATGTTTGACTCGTCTGTCCTCTGCGAGTGCTATGACGCGGGTTGT 1500

Qy      1501 GCTTGGTATGAGCTTACGCCCGCCGAGACCACAGTTAGGCTACGAGCATACATGAACACC 1560
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1501 GCTTGGTATGAGCTTACGCCCGCCGAGACCACAGTTAGGCTACGAGCATACATGAACACC 1560

Qy      1561 CCGGGACTTCCCGTGTGCCAAGACCATCTTGAATTTTGGGAGGGCGTCTTTACGGGTCTC 1620
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1561 CCGGGACTTCCCGTGTGCCAAGACCATCTTGAATTTTGGGAGGGCGTCTTTACGGGTCTC 1620

Qy      1621 ACCCACATAGACGCCCACTTCCTATCCCAGACAAAGCAGAGTGGGGAAAACCTTCCCTAT 1680
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1621 ACCCACATAGACGCCCACTTCCTATCCCAGACAAAGCAGAGTGGGGAAAACCTTCCCTAT 1680

Qy      1681 CTGGTAGCGTACCAAGCCACCGTGTGCGCTAGAGCTCAAGCCCCTCCCCCGTCGTGGGAC 1740
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1681 CTGGTAGCGTACCAAGCCACCGTGTGCGCTAGAGCTCAAGCCCCTCCCCCGTCGTGGGAC 1740

Qy      1741 CAGATGTGGAAGTGCTTGATCCGTCTCAAGCCCACCCTCCATGGGCCAACACCTCTGCTA 1800
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1741 CAGATGTGGAAGTGCTTGATCCGTCTCAAGCCCACCCTCCATGGGCCAACACCTCTGCTA 1800

Qy      1801 TATAGACTGGGCGCTGTCCAGAATGAAGTCACCCTGACGCACCCAGTCACCAAGTATATC 1860
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1801 TATAGACTGGGCGCTGTCCAGAATGAAGTCACCCTGACGCACCCAGTCACCAAGTATATC 1860

Qy      1861 ATGACATGTATGTCGGCTGACCTGGAGGTCGTCACGAGTACCTGGGTGCTCGTTGGCGGC 1920
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1861 ATGACATGTATGTCGGCTGACCTGGAGGTCGTCACGAGTACCTGGGTGCTCGTTGGCGGC 1920

Qy      1921 GTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTGCGTGGTCATAGTAGGTAGG 1980
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1921 GTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTGCGTGGTCATAGTAGGTAGG 1980

Qy      1981 ATTGTCTTGTCCGGAAAGCCGGCAATCATACCCGACAGGGAAGTCCTCTACCGGGAGTTC 2040
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1981 ATTGTCTTGTCCGGAAAGCCGGCAATCATACCCGACAGGGAAGTCCTCTACCGGGAGTTC 2040

Qy      2041 GATGAAATGGAAGAGTGCTGA 2061
             ||||||||||||||||||||
Db      2041 GATGAAATGGAAGAGTGCTGA 2061
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RESULT 3
AAD60868
ID AAD60868 standard; DNA; 2061 BP.
XX
AC AAD60868;
XX
DT 15-JAN-2004 (first entry)
XX
DE Hepatitis C virus NS3/4A DNA.
XX
KW Ribavirin; vaccine; immune response; infection; therapy; immunostimulant;
KW virucide; ds.
XX
OS Hepatitis C virus.
XX
FH Key   Location/Qualifiers
FT CDS   1. .2061
FT   /*tag= a
FT   /product= "Hepatitis C virus protein"
XX
PN US2002136740-A1.
XX
PD 26-SEP-2002.
XX
PF 15-AUG-2001; 2001US-00929955.
XX
PR 17-AUG-2000; 2000US-0225767P.
PR 29-AUG-2000; 2000US-0229175P.
XX
PA (SALL/) SALLBERG M.
PA (HULT/) HULTGREN C.
XX
PI Sallberg M, Hultgren C;
XX
DR WPI; 2003-764978/72.
DR P-PSDB; ABW00351.
XX
PT Vaccine compositions for treating and preventing disease, preferably
PT hepatitis C virus infection, comprises ribavirin and antigen that has
PT epitope present in hepatitis C virus.
XX
PS Claim 1; Page 60-61; 0pp; English.
XX
CC The invention relates to a composition comprising ribavirin and an
CC antigen, where the antigen is derived from a hepatitis virus. The vaccine
CC is useful in enhancing the immune response to a hepatitis C antigen where
CC the composition is delivered to an animal identified as requiring an
CC enhanced immune response. The vaccine is useful in the treatment and
CC prevention of hepatitis C infection. The present sequence is Hepatitis C
CC virus NS3/4A DNA
XX
SQ Sequence 2061 BP; 427 A; 616 C; 571 G; 447 T; 0 U; 0 Other;

Query Match 100.0%; Score 2061; DB 9; Length 2061;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 2061; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy         1 ATGGCGCCTATCACGGCCTATGCCCAGCAGACAAGGGGCCTTTTGGGATGCATAATCACC 60
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         1 ATGGCGCCTATCACGGCCTATGCCCAGCAGACAAGGGGCCTTTTGGGATGCATAATCACC 60

Qy        61 AGCTTGACCGGCCGGGACAAAAACCAGGTGGAGGGTGAGGTTCAGATCGTGTCAACTGCT 120
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        61 AGCTTGACCGGCCGGGACAAAAACCAGGTGGAGGGTGAGGTTCAGATCGTGTCAACTGCT 120

Qy       121 GCCCAGACTTTCTTGGCAACCTGCATTAACGGGGTGTGTTGGACTGTCTACCATGGAGCC 180
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       121 GCCCAGACTTTCTTGGCAACCTGCATTAACGGGGTGTGTTGGACTGTCTACCATGGAGCC 180
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Qy       181 GGAACAAGGACCATTGCGTCACCTAAGGGTCCTGTTATCCAGATGTACACCAATGTGGAC 240
Db       181 GGAACAAGGACCATTGCGTCACCTAAGGGTCCTGTTATCCAGATGTACACCAATGTGGAC 240

Qy       241 CAAGACCTCGTAGGCTGGCCCGCTCCCCAAGGTGCCCGCTCATTAACACCATGCACTTGC 300
Db       241 CAAGACCTCGTAGGCTGGCCCGCTCCCCAAGGTGCCCGCTCATTAACACCATGCACTTGC 300

Qy       301 GGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCCTGTGCGCCGACGG 360
Db       301 GGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCCTGTGCGCCGACGG 360

Qy       361 GGTGATGGCAGGGGCAGCCTGCTTTCGCCCCGGCCTATCTCTTACTTGAAAGGCTCCTCG 420
Db       361 GGTGATGGCAGGGGCAGCCTGCTTTCGCCCCGGCCTATCTCTTACTTGAAAGGCTCCTCG 420

Qy       421 GGAGGCCCTCTGCTGTGCCCCGCAGGACATGCCGTAGGCATATTCAGAGCCGCGGTATGC 480
Db       421 GGAGGCCCTCTGCTGTGCCCCGCAGGACATGCCGTAGGCATATTCAGAGCCGCGGTATGC 480

Qy       481 ACCCGTGGAGTGGCTAAGGCGGTGGACTTCATCCCCGTAGAGAGCTTAGAGACAACCATG 540
Db       481 ACCCGTGGAGTGGCTAAGGCGGTGGACTTCATCCCCGTAGAGAGCTTAGAGACAACCATG 540

Qy       541 AGGTCCCCGGTGTTCTCAGACAACTCCTCCCCACCAGCAGTGCCCCAGAGCTACCAAGTG 600
Db       541 AGGTCCCCGGTGTTCTCAGACAACTCCTCCCCACCAGCAGTGCCCCAGAGCTACCAAGTG 600

Qy       601 GCCCACCTGCATGCTCCCACCGGCAGCGGTAAGAGCACCAAGGTCCCGGCCGCATACGCA 660
Db       601 GCCCACCTGCATGCTCCCACCGGCAGCGGTAAGAGCACCAAGGTCCCGGCCGCATACGCA 660

Qy       661 GCTCAGGGCTACAAGGTGCTGGTGCTCAACCCCTCCGTTGCTGCAACAATGGGCTTTGGT 720
Db       661 GCTCAGGGCTACAAGGTGCTGGTGCTCAACCCCTCCGTTGCTGCAACAATGGGCTTTGGT 720

Qy       721 GCTTACATGTCCAAGGCCCATGGGATTGATCCTAACATCAGGACTGGGGTGAGGACAATT 780
Db       721 GCTTACATGTCCAAGGCCCATGGGATTGATCCTAACATCAGGACTGGGGTGAGGACAATT 780

Qy       781 ACTACTGGCAGCCCGATCACGTATTCCACCTACGGCAAGTTCCTTGCCGACGGCGGGTGT 840
Db       781 ACTACTGGCAGCCCGATCACGTATTCCACCTACGGCAAGTTCCTTGCCGACGGCGGGTGT 840

Qy       841 TCAGGGGGTGCTTATGACATAATAATTTGTGACGAGTGCCACTCCACGGATGCAACATCC 900
Db       841 TCAGGGGGTGCTTATGACATAATAATTTGTGACGAGTGCCACTCCACGGATGCAACATCC 900

Qy       901 ATCTTGGGCATTGGCACTGTCCTTGACCAAGCAGAGACCGCGGGGGCGAGACTGACTGTG 960
Db       901 ATCTTGGGCATTGGCACTGTCCTTGACCAAGCAGAGACCGCGGGGGCGAGACTGACTGTG 960

Qy       961 CTCGCCACCGCTACCCCTCCGGGCTCCGTCACTGTGCCCCATCCTAACATCGAGGAGGTT 1020
Db       961 CTCGCCACCGCTACCCCTCCGGGCTCCGTCACTGTGCCCCATCCTAACATCGAGGAGGTT 1020

Qy      1021 GCTCTGTCCACTACCGGAGAGATCCCCTTTTATGGCAAGGCTATTCCCCTTGAAGCAATT 1080
Db      1021 GCTCTGTCCACTACCGGAGAGATCCCCTTTTATGGCAAGGCTATTCCCCTTGAAGCAATT 1080

Qy      1081 AAGGGGGGGAGACATCTCATCTTCTGCCACTCAAAGAAGAAGTGCGACGAGCTCGCCGCA 1140
Db      1081 AAGGGGGGGAGACATCTCATCTTCTGCCACTCAAAGAAGAAGTGCGACGAGCTCGCCGCA 1140

Qy      1141 AAACTGGTCGCGTTGGGCGTCAATGCCGTGGCTTACTACCGCGGCCTTGATGTGTCCGTC 1200
Db      1141 AAACTGGTCGCGTTGGGCGTCAATGCCGTGGCTTACTACCGCGGCCTTGATGTGTCCGTC 1200

Qy      1201 ATCCCGACCAGTGGTGACGTTGTCGTCGTGGCAACTGACGCCCTCATGACCGGCTTTACC 1260
Db      1201 ATCCCGACCAGTGGTGACGTTGTCGTCGTGGCAACTGACGCCCTCATGACCGGCTTTACC 1260

Qy      1261 GGCGACTTCGATTCGGTGATAGACTGCAACACGTGTGTCACCCAGACAGTCGACTTCAGC 1320
Db      1261 GGCGACTTCGATTCGGTGATAGACTGCAACACGTGTGTCACCCAGACAGTCGACTTCAGC 1320

Qy      1321 CTTGACCCTACCTTCACCATTGAGACAATCACGCTTCCCCAGGATGCTGTCTCCCGTACT 1380
Db      1321 CTTGACCCTACCTTCACCATTGAGACAATCACGCTTCCCCAGGATGCTGTCTCCCGTACT 1380

Qy      1381 CAACGTCGGGGTAGGACTGGCAGAGGGAAGCCAGGCATCTACAGATTTGTGGCACCGGGG 1440
Db      1381 CAACGTCGGGGTAGGACTGGCAGAGGGAAGCCAGGCATCTACAGATTTGTGGCACCGGGG 1440

Qy      1441 GAGCGTCCTTCTGGCATGTTTGACTCGTCTGTCCTCTGCGAGTGCTATGACGCGGGTTGT 1500
Db      1441 GAGCGTCCTTCTGGCATGTTTGACTCGTCTGTCCTCTGCGAGTGCTATGACGCGGGTTGT 1500

Qy      1501 GCTTGGTATGAGCTTACGCCCGCCGAGACCACAGTTAGGCTACGAGCATACATGAACACC 1560
Db      1501 GCTTGGTATGAGCTTACGCCCGCCGAGACCACAGTTAGGCTACGAGCATACATGAACACC 1560

Qy      1561 CCGGGACTTCCCGTGTGCCAAGACCATCTTGAATTTTGGGAGGGCGTCTTTACGGGTCTC 1620
Db      1561 CCGGGACTTCCCGTGTGCCAAGACCATCTTGAATTTTGGGAGGGCGTCTTTACGGGTCTC 1620

Qy      1621 ACCCACATAGACGCCCACTTCCTATCCCAGACAAAGCAGAGTGGGGAAAACCTTCCCTAT 1680
Db      1621 ACCCACATAGACGCCCACTTCCTATCCCAGACAAAGCAGAGTGGGGAAAACCTTCCCTAT 1680

Qy      1681 CTGGTAGCGTACCAAGCCACCGTGTGCGCTAGAGCTCAAGCCCCTCCCCCGTCGTGGGAC 1740
Db      1681 CTGGTAGCGTACCAAGCCACCGTGTGCGCTAGAGCTCAAGCCCCTCCCCCGTCGTGGGAC 1740

Qy      1741 CAGATGTGGAAGTGCTTGATCCGTCTCAAGCCCACCCTCCATGGGCCAACACCTCTGCTA 1800
Db      1741 CAGATGTGGAAGTGCTTGATCCGTCTCAAGCCCACCCTCCATGGGCCAACACCTCTGCTA 1800

Qy      1801 TATAGACTGGGCGCTGTCCAGAATGAAGTCACCCTGACGCACCCAGTCACCAAGTATATC 1860
Db      1801 TATAGACTGGGCGCTGTCCAGAATGAAGTCACCCTGACGCACCCAGTCACCAAGTATATC 1860

Qy      1861 ATGACATGTATGTCGGCTGACCTGGAGGTCGTCACGAGTACCTGGGTGCTCGTTGGCGGC 1920
Db      1861 ATGACATGTATGTCGGCTGACCTGGAGGTCGTCACGAGTACCTGGGTGCTCGTTGGCGGC 1920

Qy      1921 GTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTGCGTGGTCATAGTAGGTAGG 1980
Db      1921 GTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTGCGTGGTCATAGTAGGTAGG 1980

Qy      1981 ATTGTCTTGTCCGGAAAGCCGGCAATCATACCCGACAGGGAAGTCCTCTACCGGGAGTTC 2040
Db      1981 ATTGTCTTGTCCGGAAAGCCGGCAATCATACCCGACAGGGAAGTCCTCTACCGGGAGTTC 2040

Qy      2041 GATGAAATGGAAGAGTGCTGA 2061
Db      2041 GATGAAATGGAAGAGTGCTGA 2061
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RESULT 4
AAQ32984
ID AAQ32984 standard; DNA; 943 BP.
XX
AC AAQ32984;
XX
DT 24-OCT-2003 (revised)
DT 25-MAR-2003 (revised)
DT 14-MAY-1993 (first entry)
XX
DE HCV NS3/NS4 non-structural region.
XX
KW PCR; amplification; prototype; HCV pt; ss.
XX
OS Hepatitis C virus; HCVE1.
XX
FH Key   Location/Qualifiers

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FT   CDS             2. .1210
FT                   /*tag=  a
FT                   /label= NS3/NS4
XX
PN   WO9221759-A1.
XX
PD   10-DEC-1992.
XX
PF   04-JUN-1992;   92WO-FR000501.
XX
PR   06-JUN-1991;   91FR-00006882.
XX
PA   (INSP ) INST PASTEUR.
XX
PI   Brechot C,  Kremsdorf D,  Porchon C;
XX
DR   WPI; 1992-433657/52.
XX
PT   New nucleotide and peptide sequences - specific for French isolate of
PT   hepatitis C virus and useful in diagnosing and treating related
PT   infections.
XX
PS   Disclosure; Fig 8; 50pp; French.
XX
CC   RNA was extracted from the serum of an HCV-positive bood donor, subjected
CC   to reverse transcription and the cDNA formed amplified by PCR.
CC   Amplification prods. were cloned, screened with a probe derived from the
CC   HCV prototype and inserts sequenced. The results showed marked
CC   conservation in the non-coding region, significant variability in the
CC   structural region (encoding envelope proteins) and reduced variability in
CC   the non-structural region. The NS3/NS4 coding region corresponds to
CC   positions 4361-5303 of HCV prototype (HCV pt) (WO-A-90/14436). (Updated
CC   on 25-MAR-2003 to correct PN field.) (Updated on 24-OCT-2003 to
CC   standardise OS field)
XX
SQ   Sequence 943 BP; 204 A; 292 C; 256 G; 191 T; 0 U; 0 Other;

  Query Match             3.0%;  Score 62;  DB 2;  Length 943;
  Best Local Similarity   100.0%;  Pred. No. 8.5e-21;
  Matches   62;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1915 GGCGGCGTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTGCGTGGTCATAGTA 1974
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        630 GGCGGCGTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTGCGTGGTCATAGTA 689

Qy       1975 GG 1976
             ||
Db        690 GG 691


RESULT 5
AAX84003
ID   AAX84003 standard; cDNA; 943 BP.
XX
AC   AAX84003;
XX
DT   27-AUG-2003  (revised)
DT   26-AUG-1999  (first entry)
XX
DE   HCV E1 coding sequence.
XX
KW   HCV E1 region; monoclonal antibody; diagnosis; HCV E1-specific antigen;
KW   ss.
XX
OS   Hepatitis C virus.
XX
PN   US5919454-A.
XX
PD   06-JUL-1999.
XX
PF   07-JUN-1995;   95US-00487231.
XX
PR   18-MAR-1993;   93US-00965285.
XX
PA   (INSP ) INST PASTEUR.
XX
PI   Porchon C,  Brechot C,  Kremsdorf D;
XX
DR   WPI; 1999-394595/33.
DR   P-PSDB; AAY22022.
XX
PT   Nucleotides and peptides from hepatitis C virus isolate for detecting E1-
PT   specific antigens.
XX
PS   Disclosure; Col 15-18; 45pp; English.
XX
CC   This sequence encodes a hepatitis c virus (HCV) E1 region protein. The
CC   invention relates to human or murine monoclonal antibodies directed
CC   against a HCV E1 protein sequence. The monoclonal antibodies and their
CC   fragments are useful for the in vitro diagnosis of HCV E1-specific
CC   antigens. (Updated on 27-AUG-2003 to correct OS field.)
XX
SQ   Sequence 943 BP; 204 A; 292 C; 256 G; 191 T; 0 U; 0 Other;

  Query Match             3.0%;  Score 62;  DB 2;  Length 943;
  Best Local Similarity   100.0%;  Pred. No. 8.5e-21;
  Matches   62;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1915 GGCGGCGTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTGCGTGGTCATAGTA 1974
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        630 GGCGGCGTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTGCGTGGTCATAGTA 689

Qy       1975 GG 1976
             ||
Db        690 GG 691


RESULT 6
AAX16760
ID   AAX16760 standard; cDNA to mRNA; 943 BP.
XX
AC   AAX16760;
XX
DT   27-APR-1999  (first entry)
XX
DE   Hepatitis C virus NS3/NS4 region.
XX
KW   E1 region; French Hepatitis C virus; HCV; immunogen; antibody; detection;
KW   immunoassay; ss.
XX
OS   Hepatitis C virus.
XX
FH   Key             Location/Qualifiers
FT   CDS             3. .941
FT                   /*tag=  a
FT                   /product= "NS3/NS4 protein"
FT                   /note= "no start or stop codons are given at the 5' or 3'
FT                   ends of the sequence"
XX
PN   US5866139-A.
XX
PD   02-FEB-1999.
XX
PF   07-JUN-1995;   95US-00483695.
XX
PR   18-MAR-1993;   93US-00965285.
XX
PA   (INSP ) INST PASTEUR.
XX
PI   Porchon C,  Kremsdorf D,  Brechot C;
XX
DR   WPI; 1999-141865/12.
DR   P-PSDB; AAW75483.
XX
PT   New isolated and purified Hepatitis C virus E1 peptides - useful for
PT   vaccine production or diagnostic purposes.
```

```
XX
PS   Disclosure; Col 15-18; 45pp; English.
XX
CC   The sequence represents the NS3/NS4 region from a French Hepatitis C
CC   virus (HCV) isolate. The encoded protein or peptides derived from it can
CC   be: (i) conjugated to a carrier protein and used as immunogens for
CC   eliciting protective antibodies; or (ii) labelled, and used as
CC   immunoassay reagents for detecting antibodies specific for HCV E1
XX
SQ   Sequence 943 BP; 204 A; 292 C; 256 G; 191 T; 0 U; 0 Other;

  Query Match             3.0%;  Score 62;  DB 2;  Length 943;
  Best Local Similarity   100.0%;  Pred. No. 8.5e-21;
  Matches   62;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1915 GGCGGCGTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTGCGTGGTCATAGTA 1974
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        630 GGCGGCGTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTGCGTGGTCATAGTA 689

Qy       1975 GG 1976
              ||
Db        690 GG 691


RESULT 7
ADD93727
ID   ADD93727 standard; DNA; 7983 BP.
XX
AC   ADD93727;
XX
DT   29-JAN-2004  (first entry)
XX
DE   Hepatitis C virus genotype 1a replicon.
XX
KW   HCV; vaccine; virucide; ss.
XX
OS   Hepatitis C virus; genotype 1a.
XX
PN   WO2003085084-A2.
XX
PD   16-OCT-2003.
XX
PF   03-APR-2003; 2003WO-US010177.
XX
PR   03-APR-2002; 2002US-0369685P.
XX
PA   (SMIK ) SMITHKLINE BEECHAM CORP.
XX
PI   Gates A,  Gu B,  Sarisky RT;
XX
DR   WPI; 2003-804301/75.
XX
PT   New hepatitis C virus (HCV) sub-genomic replicon, useful for facilitating
PT   screening or testing of anti-HCV drugs, comprises a nucleic acid
PT   construct encoding chimeric HCV non-structural proteins, and an NS5B
PT   polymerase gene.
XX
PS   Claim 16; Page 51-56; 159pp; English.
XX
CC   The present sequence comprises a replicating hepatitis C virus (HCV)
CC   genotype 1a replicon. The invention provides sub-genomic replicons of HCV
CC   comprising a nucleic acid construct encoding chimeric HCV nonstructural
CC   protein and an NS5B polymerase gene. A preferred replicon comprises an
CC   NS3 nucleotide sequence ADD93721 that encodes the first 75 contiguous N-
CC   terminal amino acids of the NS3 of genotype 1b, of a BB7 strain. A
CC   chimeric replicon may comprise an NS3 sequence from any of the 6 major
CC   HCV genotypes and subtypes but has its first 225 nucleotides of the
CC   coding sequence replaced by the BB7 strain NS3 sequence, especially where
CC   the replicon is from HCV genotype 1a (H77 strain) or genotype 1b (J4
CC   strain). Stable cell lines expressing and replicating functional
CC   replicons containing sequences from HCV genotype 1a (strain H77) or
CC   genotype 1b (strain J4) within the prototype 1b replicon backbone from
CC   HCV strain BB7 are provided. These can be used to screen for compounds
CC   that modulate viral replication. The sub-genomic HCV replicon systems of
CC   the invention may provide the foundation for generating HCV replicons of
CC   all 6 major genotypes and subtypes to facilitate screening, testing and
CC   evaluating anti-infective agents for HCV disease(s).
XX
SQ   Sequence 7983 BP; 1630 A; 2385 C; 2235 G; 1733 T; 0 U; 0 Other;

  Query Match             3.0%;  Score 62;  DB 9;  Length 7983;
  Best Local Similarity   100.0%;  Pred. No. 8.1e-21;
  Matches   62;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        970 GCTACCCCTCCGGGCTCCGTCACTGTGCCCCATCCTAACATCGAGGAGGTTGCTCTGTCC 1029
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2770 GCTACCCCTCCGGGCTCCGTCACTGTGCCCCATCCTAACATCGAGGAGGTTGCTCTGTCC 2829

Qy       1030 AC 1031
              ||
Db       2830 AC 2831


RESULT 8
AAD25518
ID   AAD25518 standard; DNA; 9365 BP.
XX
AC   AAD25518;
XX
DT   26-MAR-2002  (first entry)
XX
DE   Hepatitis C virus isolate colonel complete DNA genome.
XX
KW   HCV; hepatitis C virus; cytostatic; cancer; immunosuppressive; virucide;
KW   antibacterial; fungicide; protozoacide; antirheumatic; antiinflammatory;
KW   antiarthritic; rheumatoid arthritis; neuroprotective; multiple sclerosis;
KW   immune response; vasotropic; vaccine; gene therapy; autoimmune disease;
KW   vasculitis; ds.
XX
OS   Hepatitis C virus.
XX
PN   WO200176643-A1.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-US011372.
XX
PR   07-APR-2000; 2000US-0195680P.
XX
PA   (BAYU ) BAYLOR COLLEGE MEDICINE.
XX
PI   Orson FM,  Kinsey BM,  Bhogal BS;
XX
DR   WPI; 2002-066308/09.
XX
PT   Composition for oral delivery of vaccines, comprises expression vector
PT   containing antigenic genomic sequence, bound to aggregated protein-
PT   polycationic polymer conjugate or suspension.
XX
PS   Disclosure; Page 87-90; 145pp; English.
XX
CC   The invention relates to a composition comprising an expression vector
CC   bound to an aggregated protein-polycationic polymer conjugate or
CC   suspension. The expression vector contains a promoter polynucleotide
CC   sequence operatively linked to a polynucleotide sequence encoding an
CC   antigen which is a fragment of a gene or genome associated with an
CC   infectious disease, cancer and autoimmune disease such as rheumatoid
CC   arthritis, vasculitis, and multiple sclerosis, pathogenic genomes
CC   consisting of bacterium, fungus, protozoa and virus such as human
CC   immunodeficiency virus (HIV), herpes simplex virus (HSV), hepatitis C
CC   virus (HCV), influenza and respiratory syncytial virus (RSV), and
CC   optionally comprising a nucleotide sequence encoding a cytokine (or a
CC   cytokine expression vector), is useful for inducing an immune response
CC   (systemic and/or mucosal) in an organism. The cytokine expression vector
CC   contains a sequence for granulocyte macrophage-colony stimulating factor
CC   (GM-CSF) or interleukin-12 (IL-12). The polynucleotide sequences encoding
```

CC the antigen and the cytokine are under transcriptional control of same or
CC different promoter polynucleotide sequences. The expression vector, as a
CC DNA vaccine is useful for treating a condition in an organism. The
CC present sequence is hepatitis C virus isolate colonel complete DNA genome
CC related to the invention
XX
SQ Sequence 9365 BP; 1863 A; 2835 C; 2674 G; 1993 T; 0 U; 0 Other;

Query Match 3.0%; Score 62; DB 6; Length 9365;
Best Local Similarity 100.0%; Pred. No. 8.1e-21;
Matches 62; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 970 GCTACCCCTCCGGGCTCCGTCACTGTGCCCCATCCTAACATCGAGGAGGTTGCTCTGTCC 1029
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 4374 GCTACCCCTCCGGGCTCCGTCACTGTGCCCCATCCTAACATCGAGGAGGTTGCTCTGTCC 4433

Qy 1030 AC 1031
||
Db 4434 AC 4435

RESULT 9
AAZ36164
ID AAZ36164 standard; DNA; 957 BP.
XX
AC AAZ36164;
XX
DT 11-FEB-2000 (first entry)
XX
DE Nucleotide sequence of the mTNFH6NS3 clone B9 fusion protein.
XX
KW HCV; NS3 helicase; HCV subtype 1a; HCV subtype 1b; HCV infection;
KW solid phase immunoassay; HCV antigen; NS3 protease; HCV antibody;
KW passive vaccination; ss.
XX
OS Synthetic.
OS Hepatitis C virus.
XX
FH Key Location/Qualifiers
FT CDS 1. .957
FT /*tag= a
FT /product= "mTNFH6NS3 clone B9 fusion protein"
FT misc_feature 1. .120
FT /*tag= b
FT /note= "these nucleotides encode the non-NS3 sequence,
FT which is the mTNF fusion partner, the hexahistidine tag
FT and part of the multilinker"
XX
PN WO9954735-A1.
XX
PD 28-OCT-1999.
XX
PF 15-APR-1999; 99WO-EP002547.
XX
PR 17-APR-1998; 98EP-00870087.
XX
PA (INNO-) INNOGENETICS NV.
XX
PI Maertens G, Louwagie J, Bosman A, Sablon E, Zrein M;
XX
DR WPI; 2000-013283/01.
DR P-PSDB; AAY43895.
XX
PT New hepatitis C-virus polypeptide used for treating the infection.
XX
PS Claim 22; Fig 3-1; 66pp; English.
XX
CC The present sequence encodes a fusion protein comprising a Hepatitis C
CC virus (HCV) NS3 protein. The NS3 polypeptides are used in a solid phase
CC immunoassay comprising a HCV antigen (preferably a NS3 helicase or NS3
CC protease protein) in the presence of reducing agent on the solid phase.
CC Use of the reducing agent and purification of the antigen using
CC sulphonation and desulphonation steps increases its reactivity to HCV
CC antibodies and enables an earlier detection of HCV infection. The assay
CC is used for detecting antibodies raised against the HCV antigen. The
CC polypeptides are used for preventing and treating HCV infection. The
CC polypeptides are also used for diagnosing hepatitis infection. The
CC antibodies to these polypeptides are used for providing passive
CC vaccination
XX
SQ Sequence 957 BP; 211 A; 286 C; 259 G; 201 T; 0 U; 0 Other;

Query Match 3.0%; Score 61; DB 3; Length 957;
Best Local Similarity 100.0%; Pred. No. 2.8e-20;
Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 710 TGGGCTTTGGTGCTTACATGTCCAAGGCCCATGGGATTGATCCTAACATCAGGACTGGGG 769
|||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 344 TGGGCTTTGGTGCTTACATGTCCAAGGCCCATGGGATTGATCCTAACATCAGGACTGGGG 403

Qy 770 T 770
|
Db 404 T 404

RESULT 10
AAQ38233
ID AAQ38233 standard; DNA; 382 BP.
XX
AC AAQ38233;
XX
DT 25-MAR-2003 (revised)
DT 01-JUL-1993 (first entry)
XX
DE pHCV-108 coding for HCV amino acids 1454-1569.
XX
KW Hepatitis C virus; C100 antigen; CKS fusion protein; CMP-KDO synthetase;
KW immunodot assay; Non-A, non-B hepatitis; PCR; polymerase chain reaction;
KW ss.
XX
OS Hepatitis C virus.
XX
PN WO9304087-A1.
XX
PD 04-MAR-1993.
XX
PF 21-AUG-1992; 92WO-US007187.
XX
PR 21-AUG-1991; 91US-00748566.
XX
PA (ABBO) ABBOTT LAB.
XX
PI Desai SM, Casey JM, Rupprecht KR, Devare SG;
XX
DR WPI; 1993-093940/11.
XX
PT Hepatitis C assay using recombinant C-100 region antigens - for detecting
PT antibodies and antigen in body fluids from individuals exposed to
PT hepatitis C virus.
XX
PS Example 11; Page 74; 206pp; English.
XX
CC Plasmid pHCV-68 (see AAQ38232) was used in the construction of pHCV-72
CC (see AAR33569) which expresses the HCV CKS-200 antigen (HCV amino acids
CC 1192-1931) at high levels in E.coli. An NcoI fragment containing the C100
CC coding region was excised from plasmid pHCV-62 (i.e. a clone expressing
CC the HCV CKS-C100 deletion antigen HCV amino acids 1569-1574 and 1598-
CC 1931). This NcoI fragment was inserted into the NcoI site of pHCV-108
CC (i.e. AAQ38233, HCV amino acids 1454-1569) to create pHCV-68. The
CC ClaI/BamHI fragment of pHCV-68 containing the HCV NS3/C100 coding region
CC was excised and inserted into the ClaI/BamHI sites of pHCV-29 (i.e. a
CC clone expressing HCV CKS-33C antigen). (Updated on 25-MAR-2003 to correct
CC PN field.)
XX
SQ Sequence 382 BP; 76 A; 113 C; 101 G; 92 T; 0 U; 0 Other;

```
  Query Match             2.8%;  Score 58;  DB 2;  Length 382;
  Best Local Similarity   100.0%;  Pred. No. 9.6e-19;
  Matches   58;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1291 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 1348
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         33 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 90


RESULT 11
AAF32234
ID   AAF32234 standard; DNA; 382 BP.
XX
AC   AAF32234;
XX
DT   17-APR-2001  (first entry)
XX
DE   HCV recombinant antigen pHCV-108 amino acid sequence SEQ ID NO:56.
XX
KW   Hepatitis C virus; HCV; antigen; detection; antibody; ss.
XX
OS   Hepatitis C virus.
XX
PN   US6172189-B1.
XX
PD   09-JAN-2001.
XX
PF   02-JUN-1997;   97US-00867611.
XX
PR   24-AUG-1990;   90US-00572822.
PR   07-NOV-1990;   90US-00614069.
PR   21-AUG-1991;   91US-00748561.
PR   21-AUG-1991;   91US-00748565.
PR   21-AUG-1991;   91US-00748566.
PR   19-NOV-1992;   92US-00989843.
PR   10-JAN-1994;   94US-00179896.
PR   01-MAY-1996;   96US-00646757.
XX
PA   (ABBO ) ABBOTT LAB.
XX
PI   Devare SG,  Desai SM,  Casey JM,  Dailey SH,  Dawson GJ;
PI   Gutierrez RA,  Lesniewski RR,  Stewart JL,  Rupprecht KR;
XX
DR   WPI; 2001-122352/13.
XX
PT   New recombinant antigens representing distinct antigenic regions of
PT   Hepatitis C virus (HCV) genome, useful for detection of antibodies and
PT   antigens in body fluids of individuals exposed to HCV.
XX
PS   Example 17; Col 203-204; 167pp; English.
XX
CC   The present invention describes recombinant Hepatitis C virus (HCV)
CC   antigens (I). (I) is useful as a reagent for the detection of antibodies
CC   and antigen in body fluids from individuals exposed to HCV. The HCV assay
CC   uses reliable and efficient reagents and methods to accurately detect the
CC   presence of HCV antibodies in samples obtained from individuals suspected
CC   of having HCV infection. AAF32218 to AAF32235, AAB51371 to AAB51379 and
CC   AAB69001 to AAB69032 represent sequences used in the exemplification of
CC   the present invention
XX
SQ   Sequence 382 BP; 76 A; 113 C; 101 G; 92 T; 0 U; 0 Other;

  Query Match             2.8%;  Score 58;  DB 5;  Length 382;
  Best Local Similarity   100.0%;  Pred. No. 9.6e-19;
  Matches   58;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1291 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 1348
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         33 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 90


RESULT 12
AAQ38232
ID   AAQ38232 standard; DNA; 1414 BP.
XX
AC   AAQ38232;
XX
DT   25-MAR-2003  (revised)
DT   01-JUL-1993  (first entry)
XX
DE   CKS-HCV antigen fusion gene pHCV-68.
XX
KW   Hepatitis C virus; C100 antigen; CKS fusion protein; CMP-KDO synthetase;
KW   immunodot assay; Non-A, non-B hepatitis; ss.
XX
OS   Hepatitis C virus.
XX
PN   WO9304087-A1.
XX
PD   04-MAR-1993.
XX
PF   21-AUG-1992;   92WO-US007187.
XX
PR   21-AUG-1991;   91US-00748566.
XX
PA   (ABBO ) ABBOTT LAB.
XX
PI   Desai SM,  Casey JM,  Rupprecht KR,  Devare SG;
XX
DR   WPI; 1993-093940/11.
XX
PT   Hepatitis C assay using recombinant C-100 region antigens - for detecting
PT   antibodies and antigen in body fluids from individuals exposed to
PT   hepatitis C virus.
XX
PS   Example 1; Page 61-62; 206pp; English.
XX
CC   Plasmid pHCV-68 was used in the construction of pHCV-72 (see AAR33569)
CC   which expresses the HCV CKS-200 antigen (HCV amino acids 1192-1931) at
CC   high levels in E.coli. An NcoI fragment containing the C100 coding region
CC   was excised from plasmid pHCV-62 (i.e. a clone expressing the HCV CKS-
CC   C100 deletion antigen HCV amino acids 1569-1574 and 1598-1931). This NcoI
CC   fragment was inserted into the NcoI site of pHCV-108 (i.e. HCV amino
CC   acids 1454-1569) to create pHCV-68. The ClaI/BamHI fragment of pHCV-68
CC   containing the HCV NS3/C100 coding region was excised and inserted into
CC   the ClaI/BamHI sites of pHCV-29 (i.e. a clone expressing HCV CKS-33C
CC   antigen). (Updated on 25-MAR-2003 to correct PN field.)
XX
SQ   Sequence 1414 BP; 244 A; 395 C; 387 G; 388 T; 0 U; 0 Other;

  Query Match             2.8%;  Score 58;  DB 2;  Length 1414;
  Best Local Similarity   100.0%;  Pred. No. 9.3e-19;
  Matches   58;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1291 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 1348
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         22 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 79


RESULT 13
AAF32233
ID   AAF32233 standard; DNA; 1414 BP.
XX
AC   AAF32233;
XX
DT   17-APR-2001  (first entry)
XX
DE   HCV recombinant antigen pHCV-68 amino acid sequence SEQ ID NO:51.
XX
KW   Hepatitis C virus; HCV; antigen; detection; antibody; ss.
XX
OS   Hepatitis C virus.
XX
PN   US6172189-B1.
XX
PD   09-JAN-2001.
```

XX
PF 02-JUN-1997; 97US-00867611.
XX
PR 24-AUG-1990; 90US-00572822.
PR 07-NOV-1990; 90US-00614069.
PR 21-AUG-1991; 91US-00748561.
PR 21-AUG-1991; 91US-00748565.
PR 21-AUG-1991; 91US-00748566.
PR 19-NOV-1992; 92US-00989843.
PR 10-JAN-1994; 94US-00179896.
PR 01-MAY-1996; 96US-00646757.
XX
PA (ABBO) ABBOTT LAB.
XX
PI Devare SG, Desai SM, Casey JM, Dailey SH, Dawson GJ;
PI Gutierrez RA, Lesniewski RR, Stewart JL, Rupprecht KR;
XX
DR WPI; 2001-122352/13.
XX
PT New recombinant antigens representing distinct antigenic regions of
PT Hepatitis C virus (HCV) genome, useful for detection of antibodies and
PT antigens in body fluids of individuals exposed to HCV.
XX
PS Example 17; Col 185-188; 167pp; English.
XX
CC The present invention describes recombinant Hepatitis C virus (HCV)
CC antigens (I). (I) is useful as a reagent for the detection of antibodies
CC and antigen in body fluids from individuals exposed to HCV. The HCV assay
CC uses reliable and efficient reagents and methods to accurately detect the
CC presence of HCV antibodies in samples obtained from individuals suspected
CC of having HCV infection. AAF32218 to AAF32235, AAB51371 to AAB51379 and
CC AAB69001 to AAB69032 represent sequences used in the exemplification of
CC the present invention
XX
SQ Sequence 1414 BP; 244 A; 395 C; 387 G; 388 T; 0 U; 0 Other;

Query Match 2.8%; Score 58; DB 5; Length 1414;
Best Local Similarity 100.0%; Pred. No. 9.3e-19;
Matches 58; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1291 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 1348
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 22 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 79

RESULT 14
AAQ38234
ID AAQ38234 standard; DNA; 1420 BP.
XX
AC AAQ38234;
XX
DT 25-MAR-2003 (revised)
DT 01-JUL-1993 (first entry)
XX
DE Clone pHCV-69 containing the HCV NS3/C100 coding region.
XX
KW Hepatitis C virus; C100 antigen; CKS fusion protein; CMP-KDO synthetase;
KW immunodot assay; Non-A, non-B hepatitis; PCR; polymerase chain reaction;
KW ss.
XX
OS Hepatitis C virus.
XX
PN WO9304087-A1.
XX
PD 04-MAR-1993.
XX
PF 21-AUG-1992; 92WO-US007187.
XX
PR 21-AUG-1991; 91US-00748566.
XX
PA (ABBO) ABBOTT LAB.
XX
PI Desai SM, Casey JM, Rupprecht KR, Devare SG;
XX
DR WPI; 1993-093940/11.
XX
PT Hepatitis C assay using recombinant C-100 region antigens - for detecting
PT antibodies and antigen in body fluids from individuals exposed to
PT hepatitis C virus.
XX
PS Example 11; Page 74-75; 206pp; English.
XX
CC Plasmid pHCV-69 (i.e.AAQ38234) was used in the construction of pHCV-73
CC (see AAR33570) which expresses the HCV CKS-200 antigen (HCV amino acids
CC 1192-1599 and 1621-1931) at high levels in E.coli. The C100 coding region
CC was excised from plasmid pHCV-63 and inserted into pHCV-108 (i.e.
CC AAQ38233, HCV amino acids 1454-1569) to create pHCV-69. The ClaI/BamHI
CC fragment of pHCV-69 containing the HCV NS3/C100 coding region was excised
CC and inserted into the ClaI/BamHI sites of pHCV-29 (i.e. a clone
CC expressing HCV CKS-33C antigen). (Updated on 25-MAR-2003 to correct PN
CC field.)
XX
SQ Sequence 1420 BP; 246 A; 396 C; 384 G; 394 T; 0 U; 0 Other;

Query Match 2.8%; Score 58; DB 2; Length 1420;
Best Local Similarity 100.0%; Pred. No. 9.3e-19;
Matches 58; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1291 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 1348
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 22 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 79

RESULT 15
AAF32235
ID AAF32235 standard; DNA; 1420 BP.
XX
AC AAF32235;
XX
DT 17-APR-2001 (first entry)
XX
DE HCV recombinant antigen pHCV-69 amino acid sequence SEQ ID NO:57.
XX
KW Hepatitis C virus; HCV; antigen; detection; antibody; ss.
XX
OS Hepatitis C virus.
XX
PN US6172189-B1.
XX
PD 09-JAN-2001.
XX
PF 02-JUN-1997; 97US-00867611.
XX
PR 24-AUG-1990; 90US-00572822.
PR 07-NOV-1990; 90US-00614069.
PR 21-AUG-1991; 91US-00748561.
PR 21-AUG-1991; 91US-00748565.
PR 21-AUG-1991; 91US-00748566.
PR 19-NOV-1992; 92US-00989843.
PR 10-JAN-1994; 94US-00179896.
PR 01-MAY-1996; 96US-00646757.
XX
PA (ABBO) ABBOTT LAB.
XX
PI Devare SG, Desai SM, Casey JM, Dailey SH, Dawson GJ;
PI Gutierrez RA, Lesniewski RR, Stewart JL, Rupprecht KR;
XX
DR WPI; 2001-122352/13.
XX
PT New recombinant antigens representing distinct antigenic regions of
PT Hepatitis C virus (HCV) genome, useful for detection of antibodies and
PT antigens in body fluids of individuals exposed to HCV.
XX
PS Example 17; Col 203-204; 167pp; English.
XX
CC The present invention describes recombinant Hepatitis C virus (HCV)

```
CC   antigens (I). (I) is useful as a reagent for the detection of antibodies
CC   and antigen in body fluids from individuals exposed to HCV. The HCV assay
CC   uses reliable and efficient reagents and methods to accurately detect the
CC   presence of HCV antibodies in samples obtained from individuals suspected
CC   of having HCV infection. AAF32218 to AAF32235, AAB51371 to AAB51379 and
CC   AAB69001 to AAB69032 represent sequences used in the exemplification of
CC   the present invention
XX
SQ   Sequence 1420 BP; 246 A; 396 C; 384 G; 394 T; 0 U; 0 Other;

  Query Match             2.8%;  Score 58;  DB 5;  Length 1420;
  Best Local Similarity   100.0%;  Pred. No. 9.3e-19;
  Matches   58;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1291 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 1348
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         22 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 79


RESULT 16
AAQ14299
ID   AAQ14299 standard; DNA; 281 BP.
XX
AC   AAQ14299;
XX
DT   25-MAR-2003  (revised)
DT   14-JAN-1992  (first entry)
XX
DE   Hepatitis C Virus protease clone C8h.
XX
KW   NANBH; non-A, non-B hepatitis; liver disease; fusion protein; ds.
XX
OS   Hepatitis C virus.
XX
FH   Key             Location/Qualifiers
FT   CDS             1. .279
FT                   /*tag=  a
FT                   /note= "partial CDS only"
XX
PN   WO9115575-A.
XX
PD   17-OCT-1991.
XX
PF   04-APR-1990;   90US-00505433.
XX
PR   04-APR-1990;   90US-00505433.
XX
PA   (CHIR ) CHIRON CORP.
XX
PI   Houghton M, Choo Q, Kuo G;
XX
DR   WPI; 1991-325218/44.
DR   P-PSDB; AAR14541.
XX
PT   New purified protease - derived from hepatitis C virus, for assay, and
PT   designing anti-HCV agents.
XX
PS   Example 3; Fig 4; 74pp; English.
XX
CC   Clone C8h was isolated from a HCV cDNA library (ATCC 40394) using probe
CC   C8h (see AAQ14309). It was digested with EcoRI and DdeI to give a 208bp
CC   fragment. This fragment, along with fragments from clone C33c (see
CC   AAQ14303) and clone C26d (see AAQ14298), was cloned into the EcoRI site
CC   of pBR322 and transformed into E.coli HB101 to give vector C300. A 945bp
CC   NaeI/EcoRI fragment from C300 was ligated to a fragment from C7f+C20c
CC   (see AAQ14297 and AAQ14300). A fragment from this recombinant vector was
CC   eventually used to construct a vector which encodes amino acids 1-151 of
CC   human Superoxide dismutase fused to amino acids 946-1630 of HCV protease.
CC   The vector (cf1SODp600) was transformed into E.coli D1210 cells and
CC   deposited as ATCC 68275. (Updated on 25-MAR-2003 to correct PA field.)
XX
SQ   Sequence 281 BP; 41 A; 89 C; 92 G; 59 T; 0 U; 0 Other;

  Query Match             2.7%;  Score 56;  DB 2;  Length 281;
  Best Local Similarity   100.0%;  Pred. No. 1e-17;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          4 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 59


RESULT 17
AAQ14361
ID   AAQ14361 standard; DNA; 281 BP.
XX
AC   AAQ14361;
XX
DT   16-JAN-1992  (first entry)
XX
DE   Clone C8h encoding HCV protease gene.
XX
KW   Hepatitis C virus; HCV; human superoxide dismutase; SOD; ds.
XX
OS   Hepatitis C virus.
XX
PN   WO9115596-A.
XX
PD   17-OCT-1991.
XX
PF   04-APR-1990;   90US-00505434.
XX
PR   04-APR-1990;   90US-00505434.
XX
PA   (PROT-) PROTOS INC.
XX
PI   Rosenberg S;
XX
DR   WPI; 1991-325236/44.
DR   P-PSDB; AAR14352.
XX
PT   Method for assaying pharmaceutical cpds. - for determining anti-Hepatitis
PT   C Virus activity, using binding affinity.
XX
PS   Example 3; Fig 4; 68pp; English.
XX
CC   The DNA from the clone was used to prepare a hSOD:HCV protease fusion
CC   construct. The truncated protease analogue expressed by the resulting
CC   vector is proteolitically inactive and can be used to assay a wide range
CC   of pharmaceutical agents for controlling HCV. Those agents which inhibit
CC   the protease activity sufficiently will also inhibit viral infectivity.
CC   See also AAQ14358-Q14365
XX
SQ   Sequence 281 BP; 41 A; 89 C; 92 G; 59 T; 0 U; 0 Other;

  Query Match             2.7%;  Score 56;  DB 2;  Length 281;
  Best Local Similarity   100.0%;  Pred. No. 1e-17;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          4 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 59


RESULT 18
AAT59255
ID   AAT59255 standard; DNA; 281 BP.
XX
AC   AAT59255;
XX
DT   17-OCT-2003  (revised)
DT   25-MAR-2003  (revised)
DT   03-APR-1997  (first entry)
XX
DE   HCV protease clone C8h.
XX
```

KW HCV; NS3; non-structural domain 3; protease; polyprotein; inhibitor;
KW screen; processing; infection; treatment; probe; hepatitis C virus; ss.
XX
OS Hepatitis C virus; Virus.
XX
PN US5585258-A.
XX
PD 17-DEC-1996.
XX
PF 06-DEC-1994; 94US-00350884.
XX
PR 04-APR-1990; 90US-00505433.
PR 04-APR-1991; 91US-00680296.
XX
PA (CHIR) CHIRON CORP.
XX
PI Choo Q, Kuo G, Houghton M;
XX
DR WPI; 1997-051175/05.
DR P-PSDB; AAW01691.
XX
PT Compsn. contg. hepatitis C virus NS3 domain protease and related fusion
PT proteins - useful for screening specific inhibitors, potential antiviral
PT agents, prepn. of antibodies and for cleaving specific poly:peptide(s).
XX
PS Example 3; Col 65-68; 68pp; English.
XX
CC Compsns. comprising the hepatitis C virus (HCV) NS3 domain protease or
CC its active truncation analogues are claimed. Also new are fusion proteins
CC comprising the protease (or analogues) and, e.g. human superoxide (SOD)
CC or ubiquitin. The protease is essential for polyprotein processing, and
CC thus infectivity, in HCV. The compsns. are used to screen for specific
CC inhibitors (possibly useful as antiviral agents), to generate specific
CC antibodies and to cleave specific polypeptides. HCV cDNA clones (AAT59250
CC - 56 encoding AAW01686-92 resp.) were isolated from HCV genomic library
CC using probes AAT59244-49. The clones were used in the preparation of full
CC -length SOD-protease fusion proteins. (Updated on 25-MAR-2003 to correct
CC PF field.) (Updated on 17-OCT-2003 to standardise OS field)
XX
SQ Sequence 281 BP; 41 A; 89 C; 92 G; 59 T; 0 U; 0 Other;

Query Match 2.7%; Score 56; DB 2; Length 281;
Best Local Similarity 100.0%; Pred. No. 1e-17;
Matches 56; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 4 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 59

RESULT 19
AAV04988
ID AAV04988 standard; DNA; 281 BP.
XX
AC AAV04988;
XX
DT 27-AUG-2003 (revised)
DT 07-MAY-1998 (first entry)
XX
DE Nucleotide sequence of the Hepatitis c virus (HCV) clone C8h.
XX
KW Protease; HCV; NS3 domain; human superoxide dismutase; fusion protein;
KW ubiquitin; assay; activity; anti-HCV; ss.
XX
OS Hepatitis C virus.
XX
FH Key Location/Qualifiers
FT CDS 1. .279
FT /*tag= a
XX
PN US5712145-A.
XX
PD 27-JAN-1998.
XX
PF 06-SEP-1996; 96US-00709173.
XX
PR 04-APR-1990; 90US-00505433.
PR 04-APR-1991; 91US-00680296.
PR 06-DEC-1994; 94US-00350884.
PR 12-MAY-1995; 95US-00440548.
XX
PA (CHIR) CHIRON CORP.
XX
PI Choo Q, Kuo G, Houghton M;
XX
DR WPI; 1998-119986/11.
DR P-PSDB; AAW46392.
XX
PT Recombinant hepatitis C virus protease - useful in screening drugs for
PT activity against hepatitis C virus.
XX
PS Disclosure; Fig 4; 68pp; English.
XX
CC The present sequence represents the nucleotide sequence of the Hepatitis
CC C virus (HCV) clone C8h. The clone was isolated using hybridisation probe
CC AAV04975. A cDNA fragment encoding protease was isolated from the clone,
CC and cloned into an expression vector to produce a fusion protein with
CC human superoxide dismutase-protease. The HCV protease is believed to
CC cleave itself from the genomic polyprotein. In the absence of protease
CC activity, the HCV polyprotein should remain in its unprocessed form, and
CC thus render the virus non-infectious. Inhibitors of protease activity
CC should therefore also inhibit viral infectivity. The protease can
CC therefore be used for assaying compounds for activity against HCV.
CC (Updated on 27-AUG-2003 to correct OS field.)
XX
SQ Sequence 281 BP; 41 A; 89 C; 92 G; 59 T; 0 U; 0 Other;

Query Match 2.7%; Score 56; DB 2; Length 281;
Best Local Similarity 100.0%; Pred. No. 1e-17;
Matches 56; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 4 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 59

RESULT 20
AAX26393
ID AAX26393 standard; DNA; 281 BP.
XX
AC AAX26393;
XX
DT 26-MAY-1999 (first entry)
XX
DE Nucleotide seqeunce of HCV protease clone C8h.
XX
KW HCV NS3 protease; truncation analog; HCV control; protease activity;
KW viral infectivity; inactive non-cleaving protease; ss.
XX
OS Hepatitis C virus.
XX
PN US5885799-A.
XX
PD 23-MAR-1999.
XX
PF 06-SEP-1996; 96US-00709177.
XX
PR 04-APR-1990; 90US-00505433.
PR 04-APR-1991; 91US-00680296.
PR 06-DEC-1994; 94US-00350884.
PR 12-MAY-1995; 95US-00440548.
XX
PA (CHIR) CHIRON CORP.
XX
PI Choo Q, Kuo G, Houghton M;
XX

DR WPI; 1999-228536/19.
DR P-PSDB; AAW97604.
XX
PT Preparation of new Hepatitis C Virus NS3 protease - useful for screening
PT for compounds which inhibit HCV infectivity.
XX
PS Example 3; Fig 4; 71pp; English.
XX
CC The specification describes a method for making a purified Hepatitis C
CC virus (HCV) NS3 protease or active truncation analog. If the HCV protease
CC N-terminal cleavage signal is excluded (so that self-cleavage is
CC prevented), the HCV protease remains in its unprocessed form, and renders
CC the virus noninfectious. The protease is therefore useful for assaying
CC pharmaceutical agents for control of HCV, as compounds which inhibit
CC protease activity sufficiently will also inhibit viral infectivity. An
CC inactive non-cleaving protease can be used to screen for inhibitors.
CC Recombinant expression systems can be utilised to prepare recombinant HCV
CC which can be used to produce monoclonal antibodies. The present sequence
CC was isolated in the course of the invention
XX
SQ Sequence 281 BP; 41 A; 89 C; 92 G; 59 T; 0 U; 0 Other;

Query Match 2.7%; Score 56; DB 2; Length 281;
Best Local Similarity 100.0%; Pred. No. 1e-17;
Matches 56; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 4 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 59

RESULT 21
ACD44791
ID ACD44791 standard; DNA; 281 BP.
XX
AC ACD44791;
XX
DT 09-SEP-2003 (first entry)
XX
DE Hepatitis C virus (HCV) protease clone C8h DNA.
XX
KW Hepatitis C virus; HCV; protease; protease inhibition; viral infection;
KW gene; ds.
XX
OS Hepatitis C virus.
XX
PN US2003027317-A1.
XX
PD 06-FEB-2003.
XX
PF 18-JUN-2001; 2001US-00884456.
XX
PR 04-APR-1990; 90US-00505433.
PR 04-APR-1991; 91US-00680296.
PR 06-DEC-1994; 94US-00350884.
PR 12-MAY-1995; 95US-00440548.
PR 06-SEP-1996; 96US-00709177.
PR 19-FEB-1999; 99US-00253230.
XX
PA (HOUG/) HOUGHTON M.
PA (CHOO/) CHOO Q.
PA (KUOG/) KUO G.
XX
PI Houghton M, Choo Q, Kuo G;
XX
DR WPI; 2003-492037/58.
DR P-PSDB; ABO27015.
XX
PT New compositions comprising a hepatitis C virus (HCV) protease
PT polynucleotide, useful for assaying pharmaceutical agents for controlling
PT HCV, and as compounds which inhibit the protease activity and viral
PT infectivity.
XX
PS Example 3; Fig 4; 41pp; English.
XX
CC The invention describes a composition comprising a polynucleotide which
CC encodes only the hepatitis C virus (HCV) protease or an active HCV
CC protease analogue. The protease is useful for assaying pharmaceutical
CC agents for controlling HCV, and as compounds which inhibit the protease
CC activity sufficiently will also inhibit viral infectivity. This sequence
CC encodes hepatitis C virus (HCV) protease
XX
SQ Sequence 281 BP; 41 A; 89 C; 92 G; 59 T; 0 U; 0 Other;

Query Match 2.7%; Score 56; DB 8; Length 281;
Best Local Similarity 100.0%; Pred. No. 1e-17;
Matches 56; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 4 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 59

RESULT 22
ADA07864
ID ADA07864 standard; cDNA; 281 BP.
XX
AC ADA07864;
XX
DT 06-NOV-2003 (first entry)
XX
DE Hepatitis C virus cDNA C8h encoding an NS3 protease fragment.
XX
KW ss; HCV; virucide; NS3 protease; serine protease; hSOD;
KW superoxide dismutase; yeast a-factor; interleukin-2S; ubiquitin;
KW beta-galactosidase; beta-lactamase; horseradish peroxidase;
KW glucose oxidase; urease; HCV infection.
XX
OS Hepatitis C virus.
XX
PN US2003064499-A1.
XX
PD 03-APR-2003.
XX
PF 18-JUN-2001; 2001US-00884455.
XX
PR 04-APR-1990; 90US-00505433.
PR 04-APR-1991; 91US-00680296.
PR 06-DEC-1994; 94US-00350884.
PR 12-MAY-1995; 95US-00440548.
PR 06-SEP-1996; 96US-00709177.
PR 18-FEB-1999; 99US-00253675.
XX
PA (HOUG/) HOUGHTON M.
PA (CHOO/) CHOO Q.
PA (KUOG/) KUO G.
XX
PI Houghton M, Choo Q, Kuo G;
XX
DR WPI; 2003-540789/51.
DR P-PSDB; ADA07865.
XX
PT A composition for assaying and designing antiviral agents specific for
PT Hepatitis C virus (HCV) comprises a purified proteolytic polypeptide from
PT HCV or a polynucleotide which encodes HCV protease.
XX
PS Example 3; Fig 4; 40pp; English.
XX
CC The invention relates to a composition comprising a purified proteolytic
CC polypeptide derived from Hepatitis C virus (HCV) or a polynucleotide
CC which encodes only the HCV protease or an active HCV protease analogue,
CC or which encodes a fusion protein comprising HCV protease or HCV protease
CC analogue, and a fusion partner. Also included are a fusion protein
CC comprising a fusion partner fused to a proteolytic polypeptide derived
CC from HCV, a method for assaying compounds for activity against HCV
CC (comprising providing an active HCV protease, contacting the protease

CC with a compound capable of inhibiting serine protease activity and
CC measuring inhibition of the proteolytic activity of the HCV protease) and
CC an expression vector for producing HCV protease or HCV protease analogues
CC in a host cell (comprising a polynucleotide encoding HCV protease or an
CC HCV protease analogue, transcriptional and translational regulatory
CC sequences functional in the host cell operably linked to the HCV protease
CC -encoding polynucleotide and a selectable marker). The fusion partner is
CC selected from hSOD (human superoxide dismutase), yeast a-factor,
CC interleukin (IL)-2S, ubiquitin, beta-galactosidase, beta-lactamase,
CC horseradish peroxidase, glucose oxidase and urease. The composition is
CC useful in assaying and designing antiviral agents specific for HCV. The
CC method is used in identifying antiviral agents effective for treating
CC HCV. The present sequence is a cDNA encoding an HCV NS3 protease or
CC fragment.
XX
SQ Sequence 281 BP; 41 A; 89 C; 92 G; 59 T; 0 U; 0 Other;

Query Match 2.7%; Score 56; DB 8; Length 281;
Best Local Similarity 100.0%; Pred. No. 1e-17;
Matches 56; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 4 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 59

RESULT 23
AAN90317
ID AAN90317 standard; DNA; 282 BP.
XX
AC AAN90317;
XX
DT 25-MAR-2003 (revised)
DT 01-NOV-1989 (first entry)
XX
DE Hepatitis C virus (HCV) cDNA in clone 8h.
XX
KW Hepatitis C virus; cDNA; clone 8h; clone 33c; probe; vaccine.
XX
OS Pan troglodytes.
XX
FH Key Location/Qualifiers
FT CDS 3. .281
FT /*tag= a
FT misc_feature 212. .283
FT /*tag= b
XX
PN GB2212511-A.
XX
PD 26-JUL-1989.
XX
PF 18-NOV-1988; 88GB-00027024.
XX
PR 18-NOV-1987; 87US-00122714.
PR 30-DEC-1987; 87US-00139886.
PR 26-FEB-1988; 88US-00161072.
PR 26-OCT-1988; 88US-00263584.
XX
PA (CHIR) CHIRON CORP.
XX
PI Houghton M, Choo QL, Kuo G;
XX
DR WPI; 1989-215054/30.
DR P-PSDB; AAP90148.
XX
PT Hepatitis C virus gene - used for prodn. of polynucleotide probes
PT polypeptide(s) and antibodies for diagnosis, prevention and treatment of
PT infection.
XX
PS Disclosure; Fig 16; 30pp; English.
XX
CC The sequence shows hepatitis C virus (HCV) cDNA in clone 8h. The cDNA
CC encodes antigens which react with antibodies in patients with non-A non-B
CC hepatitis (NANBH). The cDNA can be used to design probes, or to
CC synthesise polypeptides, which are used to diagnose HCV-induced NANBH, to
CC raise antibodies for immunoassay or treatment, or to produce vaccines.
CC The misc. feature indicates overlap with clone 33c. See also AAP90148,
CC AAN90303-16, and N903018-36. (Updated on 25-MAR-2003 to correct PD
CC field.) (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-
CC 2003 to correct PA field.)
XX
SQ Sequence 282 BP; 41 A; 89 C; 92 G; 60 T; 0 U; 0 Other;

Query Match 2.7%; Score 56; DB 1; Length 282;
Best Local Similarity 100.0%; Pred. No. 1e-17;
Matches 56; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 6 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 61

RESULT 24
AAQ80170
ID AAQ80170 standard; DNA; 282 BP.
XX
AC AAQ80170;
XX
DT 25-MAR-2003 (revised)
DT 17-AUG-1995 (first entry)
XX
DE Hepatitis C virus (HCV) protease clone C8h DNA.
XX
KW Hepatitis C virus protease; HCV; clone C8h; viral infectivity inhibition;
KW ds.
XX
OS Hepatitis C virus.
XX
FH Key Location/Qualifiers
FT mat_peptide 1. .280
FT /*tag= a
XX
PN US5371017-A.
XX
PD 06-DEC-1994.
XX
PF 04-APR-1991; 91US-00680296.
XX
PR 04-APR-1990; 90US-00505433.
XX
PA (CHIR) CHIRON CORP.
XX
PI Houghton M, Choo Q, Kuo G;
XX
DR WPI; 1995-021889/03.
DR P-PSDB; AAR68542.
XX
PT DNA encoding hepatitis C virus protease - used to produce large amts. of
PT the protease and to develop prods. for inhibition of viral infectivity.
XX
PS Example 3; Fig 4; 69pp; English.
XX
CC AAQ80170 encodes AAR68542 hepatitis C virus (HCV) protease clone C8h,
CC using recombinant expression systems large amounts of protease can be
CC produced. The HCV protease can be used in the production of Abs. It can
CC also be used for assaying agents which inhibit protease activity, to
CC identify compounds which inhibit viral infectivity. (Updated on 25-MAR-
CC 2003 to correct PF field.)
XX
SQ Sequence 282 BP; 41 A; 89 C; 92 G; 59 T; 0 U; 1 Other;

Query Match 2.7%; Score 56; DB 2; Length 282;
Best Local Similarity 100.0%; Pred. No. 1e-17;
Matches 56; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347

```
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          5 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 60

RESULT 25
AAN92087
ID   AAN92087 standard; DNA; 283 BP.
XX
AC   AAN92087;
XX
DT   25-MAR-2003  (revised)
DT   02-MAR-1990  (first entry)
XX
DE   Sequence of the hepatitis C virus (HCV) cDNA insert in clone 8h.
XX
KW   Hepatitis C virus; HCV; non-A, non-B hepatitis; NANBH.
XX
OS   Hepatitis C virus.
XX
FH   Key              Location/Qualifiers
FT   CDS              3. .281
FT                    /*tag=  a
FT   misc_feature     212. .283
FT                    /*tag=  b
XX
PN   EP318216-A.
XX
PD   31-MAY-1989.
XX
PF   18-NOV-1988;   88EP-00310922.
XX
PR   18-NOV-1987;   87US-00122714.
PR   30-DEC-1987;   87US-00139886.
PR   26-FEB-1988;   88US-00161072.
PR   06-MAY-1988;   88US-00191263.
PR   26-OCT-1988;   88US-00263584.
PR   14-NOV-1988;   88US-00271450.
XX
PA   (CHIR ) CHIRON CORP.
PA   (CHIR ) CHIRON CORP.
XX
PI   Houghton M,  Choo QL,  Kuo G;
XX
DR   WPI; 1989-159274/22.
DR   P-PSDB; AAP92031.
XX
PT   Purified hepatitis C virus - and associated nucleic acids and
PT   polypeptide(s).
XX
PS   Claim 3; Fig 16; 139pp; English.
XX
CC   It is a double-stranded nucleotide sequence of the hepatitis C virus
CC   (HCV) cDNA insert in clone 8h. It is not necessarily physically derived
CC   from HCV cDNA and may be generated in any manner. Tag b = the region of
CC   overlap with clone 33c. It was isolated using a hybridization probe based
CC   on clone 33c. It contains one continuous open reading frame (tag a). The
CC   ORF encodes an epitope. AAN92087 could be used as a source of oligomeric
CC   DNA hybridisation probes to detect the presence of HCV nucleic acids in
CC   samples. The polypeptide(s) it encodes could be used as immunoassay
CC   reagents and vaccines and to generate antibodies useful in diagnosis and
CC   passive immunotherapy for HCV infection/non-A, non-B hepatitis. (Updated
CC   on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-2003 to correct
CC   PI field.)
XX
SQ   Sequence 283 BP; 41 A; 90 C; 92 G; 60 T; 0 U; 0 Other;

  Query Match             2.7%;  Score 56;  DB 1;  Length 283;
  Best Local Similarity   100.0%;  Pred. No. 1e-17;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          6 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 61

RESULT 26
AAQ14297
ID   AAQ14297 standard; DNA; 368 BP.
XX
AC   AAQ14297;
XX
DT   25-MAR-2003  (revised)
DT   14-JAN-1992  (first entry)
XX
DE   Hepatitis C Virus protease clone C20c.
XX
KW   NANBH; non-A, non-B hepatitis; liver disease; fusion protein; ds.
XX
OS   Hepatitis C virus.
XX
FH   Key              Location/Qualifiers
FT   CDS              1. .368
FT                    /*tag=  a
FT                    /note= "partial CDS only"
XX
PN   WO9115575-A.
XX
PD   17-OCT-1991.
XX
PF   04-APR-1990;   90US-00505433.
XX
PR   04-APR-1990;   90US-00505433.
XX
PA   (CHIR ) CHIRON CORP.
XX
PI   Houghton M,  Choo Q,  Kuo G;
XX
DR   WPI; 1991-325218/44.
DR   P-PSDB; AAR14539.
XX
PT   New purified protease - derived from hepatitis C virus, for assay, and
PT   designing anti-HCV agents.
XX
PS   Example 3; Fig 2; 74pp; English.
XX
CC   Clone C20c was isolated from a HCV cDNA library (ATCC 40394) using probe
CC   C20c (see AAQ14308). It was digested with EcoRI and SfaNI to give a 260bp
CC   fragment. This fragment, along with a fragment from clone C7f (see
CC   AAQ14300), was cloned into the EcoRI site of pBR322 and transformed into
CC   E.coli. A fragment from this recombinant vector was eventually used to
CC   construct a vector which encodes amino acids 1-151 of human Superoxide
CC   dismutase fused to amino acids 946-1630 of HCV protease. The vector
CC   (cf1SODp600) was transformed into E.coli D1210 cells and deposited as
CC   ATCC 68275. (Updated on 25-MAR-2003 to correct PA field.)
XX
SQ   Sequence 368 BP; 70 A; 114 C; 108 G; 76 T; 0 U; 0 Other;

  Query Match             2.7%;  Score 56;  DB 2;  Length 368;
  Best Local Similarity   100.0%;  Pred. No. 1e-17;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        220 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 275

RESULT 27
AAQ14359
ID   AAQ14359 standard; DNA; 368 BP.
XX
AC   AAQ14359;
XX
DT   16-JAN-1992  (first entry)
XX
DE   Clone C20c encoding HCV protease gene.
XX
```

KW Hepatitis C virus; HCV; human superoxide dismutase; SOD; ds.
XX
OS Hepatitis C virus.
XX
PN WO9115596-A.
XX
PD 17-OCT-1991.
XX
PF 04-APR-1990; 90US-00505434.
XX
PR 04-APR-1990; 90US-00505434.
XX
PA (PROT-) PROTOS INC.
XX
PI Rosenberg S;
XX
DR WPI; 1991-325236/44.
DR P-PSDB; AAR14350.
XX
PT Method for assaying pharmaceutical cpds. - for determining anti-Hepatitis
PT C Virus activity, using binding affinity.
XX
PS Example 3; Fig 2; 68pp; English.
XX
CC The DNA from the clone was used to prepare a hSOD:HCV protease fusion
CC construct. The truncated protease analogue expressed by the resulting
CC vector is proteolitically inactive and can be used to assay a wide range
CC of pharmaceutical agents for controlling HCV. Those agents which inhibit
CC the protease activity sufficiently will also inhibit viral infectivity.
CC See also AAQ14358-Q14365
XX
SQ Sequence 368 BP; 70 A; 114 C; 108 G; 76 T; 0 U; 0 Other;

Query Match 2.7%; Score 56; DB 2; Length 368;
Best Local Similarity 100.0%; Pred. No. 1e-17;
Matches 56; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 220 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 275

RESULT 28
AAQ80168
ID AAQ80168 standard; DNA; 368 BP.
XX
AC AAQ80168;
XX
DT 25-MAR-2003 (revised)
DT 17-AUG-1995 (first entry)
XX
DE Hepatitis C virus (HCV) protease clone C20c DNA.
XX
KW Hepatitis C virus protease; HCV; clone C20c;
KW viral infectivity inhibition; ds.
XX
OS Hepatitis C virus.
XX
FH Key Location/Qualifiers
FT mat_peptide 1. .366
FT /*tag= a
XX
PN US5371017-A.
XX
PD 06-DEC-1994.
XX
PF 04-APR-1991; 91US-00680296.
XX
PR 04-APR-1990; 90US-00505433.
XX
PA (CHIR) CHIRON CORP.
XX
PI Houghton M, Choo Q, Kuo G;
XX
DR WPI; 1995-021889/03.
DR P-PSDB; AAR68540.
XX
PT DNA encoding hepatitis C virus protease - used to produce large amts. of
PT the protease and to develop prods. for inhibition of viral infectivity.
XX
PS Example 3; Fig 2; 69pp; English.
XX
CC AAQ80168 encodes AAR68540 hepatitis C virus (HCV) protease clone C20c,
CC using recombinant expression systems large amounts of protease can be
CC produced. The HCV protease can be used in the production of Abs. It can
CC also be used for assaying agents which inhibit protease activity, to
CC identify compounds which inhibit viral infectivity. (Updated on 25-MAR-
CC 2003 to correct PF field.)
XX
SQ Sequence 368 BP; 70 A; 114 C; 108 G; 76 T; 0 U; 0 Other;

Query Match 2.7%; Score 56; DB 2; Length 368;
Best Local Similarity 100.0%; Pred. No. 1e-17;
Matches 56; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 220 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 275

RESULT 29
AAT59254
ID AAT59254 standard; DNA; 368 BP.
XX
AC AAT59254;
XX
DT 17-OCT-2003 (revised)
DT 25-MAR-2003 (revised)
DT 03-APR-1997 (first entry)
XX
DE HCV protease clone C20c.
XX
KW HCV; NS3; non-structural domain 3; protease; polyprotein; inhibitor;
KW screen; processing; infection; treatment; probe; hepatitis C virus; ss.
XX
OS Hepatitis C virus; Virus.
XX
PN US5585258-A.
XX
PD 17-DEC-1996.
XX
PF 06-DEC-1994; 94US-00350884.
XX
PR 04-APR-1990; 90US-00505433.
PR 04-APR-1991; 91US-00680296.
XX
PA (CHIR) CHIRON CORP.
XX
PI Choo Q, Kuo G, Houghton M;
XX
DR WPI; 1997-051175/05.
DR P-PSDB; AAW01690.
XX
PT Compsn. contg. hepatitis C virus NS3 domain protease and related fusion
PT proteins - useful for screening specific inhibitors, potential antiviral
PT agents, prepn. of antibodies and for cleaving specific poly:peptide(s).
XX
PS Example 3; Col 63-64; 68pp; English.
XX
CC Compsns. comprising the hepatitis C virus (HCV) NS3 domain protease or
CC its active truncation analogues are claimed. Also new are fusion proteins
CC comprising the protease (or analogues) and, e.g. human superoxide (SOD)
CC or ubiquitin. The protease is essential for polyprotein processing, and
CC thus infectivity, in HCV. The compsns. are used to screen for specific
CC inhibitors (possibly useful as antiviral agents), to generate specific
CC antibodies and to cleave specific polypeptides. HCV cDNA clones (AAT59250

```
CC   - 56 encoding AAW01686-92 resp.) were isolated from HCV genomic library
CC   using probes AAT59244-49. The clones were used in the preparation of full
CC   -length SOD-protease fusion proteins. (Updated on 25-MAR-2003 to correct
CC   PF field.) (Updated on 17-OCT-2003 to standardise OS field)
XX
SQ   Sequence 368 BP; 70 A; 114 C; 108 G; 76 T; 0 U; 0 Other;

  Query Match             2.7%;  Score 56;  DB 2;  Length 368;
  Best Local Similarity   100.0%;  Pred. No. 1e-17;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        220 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 275


RESULT 30
AAV04986
ID   AAV04986 standard; DNA; 368 BP.
XX
AC   AAV04986;
XX
DT   27-AUG-2003  (revised)
DT   07-MAY-1998  (first entry)
XX
DE   Nucleotide sequence of the Hepatitis c virus (HCV) clone C20c.
XX
KW   Protease; HCV; NS3 domain; human superoxide dismutase; fusion protein;
KW   ubiquitin; assay; activity; anti-HCV; ss.
XX
OS   Hepatitis C virus.
XX
FH   Key             Location/Qualifiers
FT   CDS             1. .366
FT                   /*tag=  a
XX
PN   US5712145-A.
XX
PD   27-JAN-1998.
XX
PF   06-SEP-1996;   96US-00709173.
XX
PR   04-APR-1990;   90US-00505433.
PR   04-APR-1991;   91US-00680296.
PR   06-DEC-1994;   94US-00350884.
PR   12-MAY-1995;   95US-00440548.
XX
PA   (CHIR ) CHIRON CORP.
XX
PI   Choo Q,  Kuo G,  Houghton M;
XX
DR   WPI; 1998-119986/11.
DR   P-PSDB; AAW46390.
XX
PT   Recombinant hepatitis C virus protease - useful in screening drugs for
PT   activity against hepatitis C virus.
XX
PS   Disclosure; Fig 2; 68pp; English.
XX
CC   The present sequence represents the nucleotide sequence of the Hepatitis
CC   C virus (HCV) clone C20c. The clone was isolated using hybridisation
CC   probe AAV04974. A cDNA fragment encoding protease was isolated from the
CC   clone, and cloned into an expression vector to produce a fusion protein
CC   with human superoxide dismutase-protease. The HCV protease is believed to
CC   cleave itself from the genomic polyprotein. In the absence of protease
CC   activity, the HCV polyprotein should remain in its unprocessed form, and
CC   thus render the virus non-infectious. Inhibitors of protease activity
CC   should therefore also inhibit viral infectivity. The protease can
CC   therefore be used for assaying compounds for activity against HCV.
CC   (Updated on 27-AUG-2003 to correct OS field.)
XX
SQ   Sequence 368 BP; 70 A; 114 C; 108 G; 76 T; 0 U; 0 Other;

  Query Match             2.7%;  Score 56;  DB 2;  Length 368;
  Best Local Similarity   100.0%;  Pred. No. 1e-17;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        220 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 275


RESULT 31
AAX26391
ID   AAX26391 standard; DNA; 368 BP.
XX
AC   AAX26391;
XX
DT   26-MAY-1999  (first entry)
XX
DE   Nucleotide seqeunce of HCV protease clone C20c.
XX
KW   HCV NS3 protease; truncation analog; HCV control; protease activity;
KW   viral infectivity; inactive non-cleaving protease; ss.
XX
OS   Hepatitis C virus.
XX
PN   US5885799-A.
XX
PD   23-MAR-1999.
XX
PF   06-SEP-1996;   96US-00709177.
XX
PR   04-APR-1990;   90US-00505433.
PR   04-APR-1991;   91US-00680296.
PR   06-DEC-1994;   94US-00350884.
PR   12-MAY-1995;   95US-00440548.
XX
PA   (CHIR ) CHIRON CORP.
XX
PI   Choo Q,  Kuo G,  Houghton M;
XX
DR   WPI; 1999-228536/19.
DR   P-PSDB; AAW97602.
XX
PT   Preparation of new Hepatitis C Virus NS3 protease - useful for screening
PT   for compounds which inhibit HCV infectivity.
XX
PS   Example 3; Fig 2; 71pp; English.
XX
CC   The specification describes a method for making a purified Hepatitis C
CC   virus (HCV) NS3 protease or active truncation analog. If the HCV protease
CC   N-terminal cleavage signal is excluded (so that self-cleavage is
CC   prevented), the HCV protease remains in its unprocessed form, and renders
CC   the virus noninfectious. The protease is therefore useful for assaying
CC   pharmaceutical agents for control of HCV, as compounds which inhibit
CC   protease activity sufficiently will also inhibit viral infectivity. An
CC   inactive non-cleaving protease can be used to screen for inhibitors.
CC   Recombinant expression systems can be utilised to prepare recombinant HCV
CC   which can be used to produce monoclonal antibodies. The present sequence
CC   was isolated in the course of the invention
XX
SQ   Sequence 368 BP; 70 A; 114 C; 108 G; 76 T; 0 U; 0 Other;

  Query Match             2.7%;  Score 56;  DB 2;  Length 368;
  Best Local Similarity   100.0%;  Pred. No. 1e-17;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        220 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 275


RESULT 32
ACD44789
ID   ACD44789 standard; DNA; 368 BP.
```

XX
AC ACD44789;
XX
DT 09-SEP-2003 (first entry)
XX
DE Hepatitis C virus (HCV) protease clone C20c DNA.
XX
KW Hepatitis C virus; HCV; protease; protease inhibition; viral infection;
KW gene; ds.
XX
OS Hepatitis C virus.
XX
PN US2003027317-A1.
XX
PD 06-FEB-2003.
XX
PF 18-JUN-2001; 2001US-00884456.
XX
PR 04-APR-1990; 90US-00505433.
PR 04-APR-1991; 91US-00680296.
PR 06-DEC-1994; 94US-00350884.
PR 12-MAY-1995; 95US-00440548.
PR 06-SEP-1996; 96US-00709177.
PR 19-FEB-1999; 99US-00253230.
XX
PA (HOUG/) HOUGHTON M.
PA (CHOO/) CHOO Q.
PA (KUOG/) KUO G.
XX
PI Houghton M, Choo Q, Kuo G;
XX
DR WPI; 2003-492037/58.
DR P-PSDB; ABO27013.
XX
PT New compositions comprising a hepatitis C virus (HCV) protease
PT polynucleotide, useful for assaying pharmaceutical agents for controlling
PT HCV, and as compounds which inhibit the protease activity and viral
PT infectivity.
XX
PS Example 3; Fig 2; 41pp; English.
XX
CC The invention describes a composition comprising a polynucleotide which
CC encodes only the hepatitis C virus (HCV) protease or an active HCV
CC protease analogue. The protease is useful for assaying pharmaceutical
CC agents for controlling HCV, and as compounds which inhibit the protease
CC activity sufficiently will also inhibit viral infectivity. This sequence
CC encodes hepatitis C virus (HCV) protease
XX
SQ Sequence 368 BP; 70 A; 114 C; 108 G; 76 T; 0 U; 0 Other;

Query Match 2.7%; Score 56; DB 8; Length 368;
Best Local Similarity 100.0%; Pred. No. 1e-17;
Matches 56; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 220 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 275

RESULT 33
ADA07860
ID ADA07860 standard; cDNA; 368 BP.
XX
AC ADA07860;
XX
DT 06-NOV-2003 (first entry)
XX
DE Hepatitis C virus cDNA C20c encoding an NS3 protease fragment.
XX
KW ss; HCV; virucide; NS3 protease; serine protease; hSOD;
KW superoxide dismutase; yeast a-factor; interleukin-2S; ubiquitin;
KW beta-galactosidase; beta-lactamase; horseradish peroxidase;
KW glucose oxidase; urease; HCV infection.
XX
OS Hepatitis C virus.
XX
PN US2003064499-A1.
XX
PD 03-APR-2003.
XX
PF 18-JUN-2001; 2001US-00884455.
XX
PR 04-APR-1990; 90US-00505433.
PR 04-APR-1991; 91US-00680296.
PR 06-DEC-1994; 94US-00350884.
PR 12-MAY-1995; 95US-00440548.
PR 06-SEP-1996; 96US-00709177.
PR 18-FEB-1999; 99US-00253675.
XX
PA (HOUG/) HOUGHTON M.
PA (CHOO/) CHOO Q.
PA (KUOG/) KUO G.
XX
PI Houghton M, Choo Q, Kuo G;
XX
DR WPI; 2003-540789/51.
DR P-PSDB; ADA07861.
XX
PT A composition for assaying and designing antiviral agents specific for
PT Hepatitis C virus (HCV) comprises a purified proteolytic polypeptide from
PT HCV or a polynucleotide which encodes HCV protease.
XX
PS Example 3; Fig 2; 40pp; English.
XX
CC The invention relates to a composition comprising a purified proteolytic
CC polypeptide derived from Hepatitis C virus (HCV) or a polynucleotide
CC which encodes only the HCV protease or an active HCV protease analogue,
CC or which encodes a fusion protein comprising HCV protease or HCV protease
CC analogue, and a fusion partner. Also included are a fusion protein
CC comprising a fusion partner fused to a proteolytic polypeptide derived
CC from HCV, a method for assaying compounds for activity against HCV
CC (comprising providing an active HCV protease, contacting the protease
CC with a compound capable of inhibiting serine protease activity and
CC measuring inhibition of the proteolytic activity of the HCV protease) and
CC an expression vector for producing HCV protease or HCV protease analogues
CC in a host cell (comprising a polynucleotide encoding HCV protease or an
CC HCV protease analogue, transcriptional and translational regulatory
CC sequences functional in the host cell operably linked to the HCV protease
CC -encoding polynucleotide and a selectable marker). The fusion partner is
CC selected from hSOD (human superoxide dismutase), yeast a-factor,
CC interleukin (IL)-2S, ubiquitin, beta-galactosidase, beta-lactamase,
CC horseradish peroxidase, glucose oxidase and urease. The composition is
CC useful in assaying and designing antiviral agents specific for HCV. The
CC method is used in identifying antiviral agents effective for treating
CC HCV. The present sequence is a cDNA encoding an HCV NS3 protease or
CC fragment.
XX
SQ Sequence 368 BP; 70 A; 114 C; 108 G; 76 T; 0 U; 0 Other;

Query Match 2.7%; Score 56; DB 8; Length 368;
Best Local Similarity 100.0%; Pred. No. 1e-17;
Matches 56; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 220 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 275

RESULT 34
ABX15706
ID ABX15706 standard; DNA; 612 BP.
XX
AC ABX15706;
XX
DT 28-MAR-2003 (first entry)
XX

```
DE   Anti-viral synthetic prototoxophore associated DNA sequence.
XX
KW   Hepatitis C; ds; viral prototoxophore; anti-viral; tumour; virus;
KW   infection; antitumour; toxophore; human immunodeficiency virus;
KW   HIV infection; herpes simplex virus; HSV; rhinovirus; NS3 protease.
XX
OS   Unidentified.
XX
PN   WO200287500-A2.
XX
PD   07-NOV-2002.
XX
PF   26-APR-2002; 2002WO-US013223.
XX
PR   27-APR-2001; 2001US-0286893P.
XX
PA   (NEWB-) NEWBIOTICS INC.
XX
PI   Cathers BE,  Neuteboom STC,  Shepard HM;
XX
DR   WPI; 2003-167102/16.
XX
PT   Novel synthetic viral prototoxophore for treating viral infections, has
PT   toxin moiety incorporated into substrate domain specific for viral
PT   enzyme, bound and modified by viral enzyme to get converted into
PT   toxophore.
XX
PS   Example 1; Page 62; 66pp; English.
XX
CC   This invention relates to a novel synthetic viral prototoxophore
CC   comprising a toxin moiety operatively incorporated into a substrate
CC   domain specific for a viral enzyme. This prototoxophore may be bound and
CC   modified by the viral enzyme thus converting it to a toxophore. Also
CC   disclosed in the invention is a method for enhancing the anti-viral
CC   effect of an antiviral agent, this method comprises contacting a cell,
CC   infected with a virus or is susceptible to infection, with a
CC   prototoxophore. The invention further comprises an assay to identify anti
CC   -viral agents, comprising contacting an infected cell with a candidate
CC   agent and comparing the ability of the agent to inhibit the growth or
CC   infectivity of the virus in the cell. The prototoxophores of the
CC   invention may have virucide or antitumour activity. The prototoxophores
CC   of the invention may be useful for reducing or inhibiting viral
CC   infectivity, by contacting a cell (e.g. lymphocyte, nerve cell,
CC   connective tissue cell, muscle cell or hepatocyte) which is infected with
CC   a virus or is susceptible to infection with a virus, with an effective
CC   amount of the prototoxophore. The cells are cell lines adapted to long
CC   term continuous culture or isolated from a subject. The prototoxophore is
CC   also useful for ameliorating the severity of a viral infection in a
CC   subject, where the virus is selected from human immunodeficiency virus
CC   (HIV), herpes simplex virus (HSV), rhinovirus and hepatitis virus, by
CC   administering an effective amount of the prototoxophore to the subject.
CC   The prototoxophores of the invention are also useful for treating
CC   tumours. The present sequence represents an antiviral prototoxophore
CC   associated DNA sequence, this sequence is described as a recombinant
CC   NS3/NS4 fusion protein in example 1 of the invention although it is
CC   clearly not a protein sequence
XX
SQ   Sequence 612 BP; 120 A; 171 C; 191 G; 130 T; 0 U; 0 Other;

  Query Match             2.7%;  Score 56;  DB 8;  Length 612;
  Best Local Similarity   100.0%;  Pred. No. 1e-17;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        349 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 404


RESULT 35
AAQ14304
ID   AAQ14304 standard; DNA; 1947 BP.
XX
AC   AAQ14304;
XX
DT   25-MAR-2003  (revised)
DT   14-JAN-1992  (first entry)
XX
DE   Vector cf1SODp600 sequence encoding hSOD-HCV protease fusion protein.
XX
KW   NANBH; non-A, non-B hepatitis; liver disease;
KW   human superoxide dismutase leader sequence; ds.
XX
OS   Hepatitis C virus.
XX
FH   Key             Location/Qualifiers
FT   sig_peptide     1. .465
FT                   /*tag=  a
FT                   /label= hSOD leader
FT   mat_peptide     466. .1947
FT                   /*tag=  b
FT                   /product= "HCV protease"
XX
PN   WO9115575-A.
XX
PD   17-OCT-1991.
XX
PF   04-APR-1990;   90US-00505433.
XX
PR   04-APR-1990;   90US-00505433.
XX
PA   (CHIR ) CHIRON CORP.
XX
PI   Houghton M,  Choo Q,  Kuo G;
XX
DR   WPI; 1991-325218/44.
DR   P-PSDB; AAR14546.
XX
PT   New purified protease - derived from hepatitis C virus, for assay, and
PT   designing anti-HCV agents.
XX
PS   Example 4; Fig 10; 74pp; English.
XX
CC   cf1SODp600 was transformed into E.coli D1210 cells and deposited as ATCC
CC   68275. The full-length HCV protease coding sequence was constructed from
CC   a number of different clones (see AAQ14297-Q14303). (Updated on 25-MAR-
CC   2003 to correct PA field.)
XX
SQ   Sequence 1947 BP; 427 A; 539 C; 566 G; 415 T; 0 U; 0 Other;

  Query Match             2.7%;  Score 56;  DB 2;  Length 1947;
  Best Local Similarity   100.0%;  Pred. No. 9.7e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1000 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 1055


RESULT 36
ABK15344
ID   ABK15344 standard; DNA; 2058 BP.
XX
AC   ABK15344;
XX
DT   08-MAY-2002  (first entry)
XX
DE   Hepatitis C virus NS3/4a conformational epitope gene sequence.
XX
KW   Hepatitis C virus; HCV; NS3/4a conformational epitope; seroconversion;
KW   immunoassay solid support; multiple epitope fusion antigen; MEFA;
KW   non-structural protein; gene; ds.
XX
OS   Hepatitis C virus.
XX
FH   Key             Location/Qualifiers
FT   CDS             1. .2058
```

```
FT                   /*tag=  a
FT                   /partial
FT                   /product= "HCV NS3/4a conformational epitope"
FT                   /note= "This sequence lacks a stop codon"
XX
PN   WO200196870-A2.
XX
PD   20-DEC-2001.
XX
PF   14-JUN-2001; 2001WO-US019156.
XX
PR   15-JUN-2000; 2000US-0212082P.
PR   02-APR-2001; 2001US-0280811P.
PR   02-APR-2001; 2001US-0280867P.
XX
PA   (CHIR ) CHIRON CORP.
XX
PI   Chien DY,  Arcangel P,  Tandeske L,  George-Nasciemento C,  Coit D;
PI   Medina-Selby A;
XX
DR   WPI; 2002-090228/12.
DR   P-PSDB; AAU76377.
XX
PT   Immunoassay solid support, useful for detecting hepatitis C virus
PT   infection in biological sample, comprises HCV NS3/4a conformational
PT   epitope and multiple epitope fusion antigen bound to the support.
XX
PS   Disclosure; Fig 3; 92pp; English.
XX
CC   The present invention relates to a new immunoassay solid support
CC   consisting essentially of at least one hepatitis C virus (HCV) NS3/4a
CC   conformational epitope and a multiple epitope fusion antigen (MEFA),
CC   bound to the support. The NS3/4a conformational epitope and/or MEFA
CC   reacts specifically with anti-HCV antibodies present in a biological
CC   sample from an HCV-infected individual. The immunoassay of the invention
CC   is useful for detecting hepatitis C virus infection in a biological
CC   sample. The method of the invention provides a sensitive, accurate
CC   diagnostic and prognostic tool to provide adequate patient care and to
CC   prevent transmission of HCV by blood and by blood products, or by
CC   personal contact. Use of NS3/4a conformational epitope in combination
CC   with MEFA, provides a sensitive and reliable method for detecting early
CC   HCV seroconversion. Use of MEFA has the added advantages of decreasing
CC   masking problems, improving sensitivity in detecting antibodies by
CC   allowing a greater number of epitopes on a unit surface area of
CC   substrate, and improving substrate. Detection accuracy is increased and
CC   the incidence of false results is reduced because of the identification
CC   and the use of highly immunogenic HCV antigens which are present during
CC   the early stages of HCV seroconversion. The present nucleic acid sequence
CC   encodes the non-structural protein NS3/4a conformational epitope of the
CC   invention
XX
SQ   Sequence 2058 BP; 419 A; 633 C; 581 G; 425 T; 0 U; 0 Other;

  Query Match             2.7%;  Score 56;  DB 6;  Length 2058;
  Best Local Similarity   100.0%;  Pred. No. 9.7e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347


RESULT 37
AAD29795
ID   AAD29795 standard; DNA; 2058 BP.
XX
AC   AAD29795;
XX
DT   17-MAY-2002  (first entry)
XX
DE   HCV-1 NS3/4a mutant conformational antigen encoding DNA.
XX
KW   Hepatitis C virus; NS3/4a antigen; HCV infection; mutant; ds.
XX
OS   Hepatitis C virus type 1.
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   CDS             1. .686
FT                   /*tag=  a
FT                   /product= "HCV-1 NS3/4a conformational antigen"
FT                   /note= "CDS does not include stop codon"
FT                   /partial
XX
PN   WO200196875-A2.
XX
PD   20-DEC-2001.
XX
PF   14-JUN-2001; 2001WO-US019369.
XX
PR   15-JUN-2000; 2000US-0212082P.
PR   02-APR-2001; 2001US-0280811P.
PR   02-APR-2001; 2001US-0280867P.
XX
PA   (CHIR ) CHIRON CORP.
XX
PI   Chien DY,  Arcangel P,  Tandeske L,  George-Nasciemento C,  Coit D;
PI   Medina-Selby A;
XX
DR   WPI; 2002-179522/23.
DR   P-PSDB; AAE18689.
XX
PT   Immunoassay solid support useful for detecting hepatitis C virus
PT   infection in a biological sample, comprises at least one of HCV anti-core
PT   antibody and HCV NS3/4a epitope, bound to the support.
XX
PS   Example 2; Fig 4; 87pp; English.
XX
CC   The present invention relates to hepatitis C virus (HCV) core antigen and
CC   NS (nonstructural) 3/4a antibody combination assay that can detect both
CC   HCV antigens and antibodies present in a sample using a single solid
CC   matrix as well as immunoassay solid supports for use in the assay. The
CC   solid support is useful for detecting HCV infection in a biological
CC   sample. The present sequence is a DNA encoding HCV-1 NS3/4a mutant
CC   conformational antigen. This sequence is used in the exemplification of
CC   the invention
XX
SQ   Sequence 2058 BP; 419 A; 634 C; 580 G; 425 T; 0 U; 0 Other;

  Query Match             2.7%;  Score 56;  DB 6;  Length 2058;
  Best Local Similarity   100.0%;  Pred. No. 9.7e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347


RESULT 38
ABX14410
ID   ABX14410 standard; DNA; 2058 BP.
XX
AC   ABX14410;
XX
DT   06-MAR-2003  (first entry)
XX
DE   DNA encoding HCV-1 NS3/4a conformational antigen.
XX
KW   Immunoassay solid support; Hepatitis C Virus type-1; HCV-1;
KW   NS3/4a conformational epitope; multiple epitope fusion antigen; MEFA;
KW   anti-HCV antibody; NS3/4a conformational antigen; HCV infection; mutant;
KW   gene; ds.
XX
OS   Hepatitis C virus type 1.
OS   Synthetic.
XX
```

```
FH   Key             Location/Qualifiers
FT   CDS             1. .2058
FT                   /*tag= a
FT                   /partial
FT                   /product= "NS3/4a conformational antigen"
FT                   /note= "This sequence lacks a stop codon"
XX
PN   US2002146685-A1.
XX
PD   10-OCT-2002.
XX
PF   14-JUN-2001; 2001US-00881654.
XX
PR   15-JUN-2000; 2000US-0212082P.
PR   02-APR-2001; 2001US-0280811P.
PR   02-APR-2001; 2001US-0280867P.
XX
PA   (CHIE/) CHIEN D Y.
PA   (ARCA/) ARCANGEL P.
PA   (TAND/) TANDESKE L.
PA   (GEOR/) GEORGE-NASCIMENTO C.
PA   (COIT/) COIT D.
PA   (MEDI/) MEDINA-SELBY A.
XX
PI   Chien DY, Arcangel P, Tandeske L, George-Nascimento C, Coit D;
PI   Medina-Selby A;
XX
DR   WPI; 2003-147573/14.
DR   P-PSDB; ABG72261.
XX
PT   Immunoassay solid support for detecting Hepatitis C Virus infection in
PT   biological samples, comprises Hepatitis C Virus conformational epitope
PT   and multiple epitope fusion antigen.
XX
PS   Disclosure; Fig 3A-3D; 45pp; English.
XX
CC   The present invention relates to immunoassays comprising Hepatitis C
CC   Virus (HCV) NS3/4a conformational epitope and multiple epitope fusion
CC   antigen (MEFA), bound to a solid support. The NS3/4a epitope and/or the
CC   multiple epitope fusion antigen react with anti-HCV antibodies present in
CC   a biological sample from an HCV-infected individual. The immunoassays and
CC   methods of the invention are useful for detecting HCV infection in a
CC   biological sample. The inventive immunoassay solid support provides a
CC   sensitive and reliable method for detecting early HCV seroconversion. The
CC   assays can detect HCV infection caused by any six known genotypes of HCV.
CC   The use of the multiple epitope fusion proteins decreases masking
CC   problems, improves sensitivity in detecting antibodies by allowing a
CC   greater number of epitopes on a unit area of substrate, and improves
CC   selectivity. The present sequence encodes HCV type 1 (HCV-1) NS3/4a
CC   conformational antigen, a mutant of the HCV-1 NS3/4a polypeptide
XX
SQ   Sequence 2058 BP; 419 A; 633 C; 581 G; 425 T; 0 U; 0 Other;

  Query Match              2.7%;  Score 56;  DB 7;  Length 2058;
  Best Local Similarity   100.0%;  Pred. No. 9.7e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347


RESULT 39
ADC06768
ID   ADC06768 standard; DNA; 2058 BP.
XX
AC   ADC06768;
XX
DT   18-DEC-2003  (first entry)
XX
DE   HCV mutant conformational NS3/4a epitope DNA.
XX
KW   immunoassay solid support; HCV; NS3/4a; non-structural;
KW   non-A, non-B hepatitis; NANB; conformational epitope; mutant; ds; gene.
XX
OS   Synthetic.
OS   Hepatitis C virus.
XX
FH   Key             Location/Qualifiers
FT   CDS             1. .2058
FT                   /*tag= a
FT                   /partial
FT                   /product= "HCV mutant conformational NS3/4a epitope
FT                   protein T403P/S404I"
FT                   /note= "No stop codon"
XX
PN   US2002192639-A1.
XX
PD   19-DEC-2002.
XX
PF   14-JUN-2001; 2001US-00881239.
XX
PR   15-JUN-2000; 2000US-0212082P.
PR   02-APR-2001; 2001US-0280811P.
PR   02-APR-2001; 2001US-0280867P.
XX
PA   (CHIE/) CHIEN D Y.
PA   (ARCA/) ARCANGEL P.
PA   (TAND/) TANDESKE L.
PA   (GEOR/) GEORGE-NASCIMENTO C.
PA   (COIT/) COIT D.
PA   (MEDI/) MEDINA-SELBY A.
XX
PI   Chien DY, Arcangel P, Tandeske L, George-Nascimento C, Coit D;
PI   Medina-Selby A;
XX
DR   WPI; 2003-644609/61.
DR   P-PSDB; ADC06767.
XX
PT   Immunoassay solid support for detecting hepatitis C virus infection in
PT   biological samples, comprises a hepatitis C virus anti-core antibody and
PT   an isolated hepatitis C virus NS3/4a epitope bound HCV anti-core
PT   antibody.
XX
PS   Example 2; Fig 4; 40pp; English.
XX
CC   The invention relates to a novel immunoassay solid support comprising at
CC   least one hepatitis C virus (HCV) anti-core antibody and at least one
CC   isolated HCV NS3/4a (non-structural protein 3/4a) epitope bound thereto.
CC   The system of the invention may be useful for detecting HCV infection in
CC   a biological sample and for treating or detecting non-A, non-B hepatitis
CC   (NANB hepatitis). The current sequence is that of the HCV mutant
CC   conformational NS3/4a epitope DNA of the invention.
XX
SQ   Sequence 2058 BP; 419 A; 634 C; 580 G; 425 T; 0 U; 0 Other;

  Query Match              2.7%;  Score 56;  DB 9;  Length 2058;
  Best Local Similarity   100.0%;  Pred. No. 9.7e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347


RESULT 40
AAQ14296
ID   AAQ14296 standard; cDNA; 2064 BP.
XX
AC   AAQ14296;
XX
DT   25-MAR-2003  (revised)
DT   14-JAN-1992  (first entry)
XX
DE   Hepatitis C Virus protease.
XX
```

KW NANBH; non-A, non-B hepatitis; fusion protein; ds.
XX
OS Hepatitis C virus.
XX
FH Key Location/Qualifiers
FT CDS 7. .2064
FT /*tag= a
FT /product= "HCV protease"
XX
PN WO9115575-A.
XX
PD 17-OCT-1991.
XX
PF 04-APR-1990; 90US-00505433.
XX
PR 04-APR-1990; 90US-00505433.
XX
PA (CHIR) CHIRON CORP.
XX
PI Houghton M, Choo Q, Kuo G;
XX
DR WPI; 1991-325218/44.
DR P-PSDB; AAR14538.
XX
PT New purified protease - derived from hepatitis C virus, for assay, and
PT designing anti-HCV agents.
XX
PS Claim 5; Fig 1; 74pp; English.
XX
CC HCV protease is encoded in the NS3 domain of the HCV genome. The sequence
CC varies from strain to strain. The recombinant protease is preferably
CC produced as a fusion protein in which the fusion partner is human
CC superoxide dismutase, yeast alpha-factor, IL-2 signal, ubiquitin, beta-
CC galactosidase, beta-lactamase, horseradish peroxidase, glucose oxidase or
CC urease. See also AAQ14297-Q14311. (Updated on 25-MAR-2003 to correct PA
CC field.)
XX
SQ Sequence 2064 BP; 413 A; 640 C; 584 G; 427 T; 0 U; 0 Other;

Query Match 2.7%; Score 56; DB 2; Length 2064;
Best Local Similarity 100.0%; Pred. No. 9.7e-18;
Matches 56; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 541 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 596

RESULT 41
AAQ80167
ID AAQ80167 standard; DNA; 2064 BP.
XX
AC AAQ80167;
XX
DT 25-MAR-2003 (revised)
DT 16-AUG-1995 (first entry)
XX
DE Hepatitis C virus (HCV) protease DNA.
XX
KW Hepatitis C virus protease; HCV; viral infectivity inhibition; ds.
XX
OS Hepatitis C virus.
XX
FH Key Location/Qualifiers
FT mat_peptide 7. .2064
FT /*tag= a
XX
PN US5371017-A.
XX
PD 06-DEC-1994.
XX
PF 04-APR-1991; 91US-00680296.
XX
PR 04-APR-1990; 90US-00505433.
XX
PA (CHIR) CHIRON CORP.
XX
PI Houghton M, Choo Q, Kuo G;
XX
DR WPI; 1995-021889/03.
DR P-PSDB; AAR66267.
XX
PT DNA encoding hepatitis C virus protease - used to produce large amts. of
PT the protease and to develop prods. for inhibition of viral infectivity.
XX
PS Claim 2; Fig 1; 69pp; English.
XX
CC AAQ80167 encodes AAR66267 hepatitis C virus (HCV) protease, using
CC recombinant expression systems large amounts of protease can be produced.
CC The HCV protease can be used in the production of Abs. It can also be
CC used for assaying agents which inhibit protease activity, to identify
CC compounds which inhibit viral infectivity. (Updated on 25-MAR-2003 to
CC correct PF field.)
XX
SQ Sequence 2064 BP; 413 A; 641 C; 583 G; 427 T; 0 U; 0 Other;

Query Match 2.7%; Score 56; DB 2; Length 2064;
Best Local Similarity 100.0%; Pred. No. 9.7e-18;
Matches 56; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 541 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 596

RESULT 42
AAT59260
ID AAT59260 standard; DNA; 2064 BP.
XX
AC AAT59260;
XX
DT 17-OCT-2003 (revised)
DT 25-MAR-2003 (revised)
DT 03-APR-1997 (first entry)
XX
DE DNA encoding Hepatitis C virus NS3 domain protease.
XX
KW HCV; NS3; non-structural domain 3; protease; polyprotein; inhibitor;
KW screen; processing; infection; treatment; ss.
XX
OS Hepatitis C virus; Virus.
XX
FH Key Location/Qualifiers
FT CDS 7. .2064
FT /*tag= a
FT /note= "NS3 domain polypeptide"
XX
PN US5585258-A.
XX
PD 17-DEC-1996.
XX
PF 06-DEC-1994; 94US-00350884.
XX
PR 04-APR-1990; 90US-00505433.
PR 04-APR-1991; 91US-00680296.
XX
PA (CHIR) CHIRON CORP.
XX
PI Choo Q, Kuo G, Houghton M;
XX
DR WPI; 1997-051175/05.
DR P-PSDB; AAW01693.
XX
PT Compsn. contg. hepatitis C virus NS3 domain protease and related fusion
PT proteins - useful for screening specific inhibitors, potential antiviral
PT agents, prepn. of antibodies and for cleaving specific poly:peptide(s).

```
XX
PS   Example 1; Col 53-60; 68pp; English.
XX
CC   This sequence encodes part of the hepatitis C virus (HCV) polyprotein
CC   which contains the NS3 domain protease. Compsns. comprising the HCV
CC   protease or its active truncation analogues are claimed. Also new are
CC   fusion proteins comprising the protease (or analogues) and, e.g. human
CC   superoxide or ubiquitin. The protease is essential for polyprotein
CC   processing, and thus infectivity, in HCV. The compsns. are used to screen
CC   for specific inhibitors (possibly useful as antiviral agents), to
CC   generate specific antibodies and to cleave specific polypeptides.
CC   (Updated on 25-MAR-2003 to correct PF field.) (Updated on 17-OCT-2003 to
CC   standardise OS field)
XX
SQ   Sequence 2064 BP; 413 A; 641 C; 583 G; 427 T; 0 U; 0 Other;

  Query Match             2.7%;  Score 56;  DB 2;  Length 2064;
  Best Local Similarity   100.0%;  Pred. No. 9.7e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 596


RESULT 43
AAV04985
ID   AAV04985 standard; DNA; 2064 BP.
XX
AC   AAV04985;
XX
DT   27-AUG-2003  (revised)
DT   07-MAY-1998  (first entry)
XX
DE   Nucleotide sequence encoding Hepatitis c virus (HCV) protease.
XX
KW   Protease; HCV; NS3 domain; human superoxide dismutase; fusion protein;
KW   ubiquitin; assay; activity; anti-HCV; ss.
XX
OS   Hepatitis C virus.
XX
FH   Key             Location/Qualifiers
FT   CDS             7. .2064
FT                   /*tag=  a
FT                   /note= "no ATG start or STOP codons given"
XX
PN   US5712145-A.
XX
PD   27-JAN-1998.
XX
PF   06-SEP-1996;   96US-00709173.
XX
PR   04-APR-1990;   90US-00505433.
PR   04-APR-1991;   91US-00680296.
PR   06-DEC-1994;   94US-00350884.
PR   12-MAY-1995;   95US-00440548.
XX
PA   (CHIR ) CHIRON CORP.
XX
PI   Choo Q,  Kuo G,  Houghton M;
XX
DR   WPI; 1998-119986/11.
DR   P-PSDB; AAW46389.
XX
PT   Recombinant hepatitis C virus protease - useful in screening drugs for
PT   activity against hepatitis C virus.
XX
PS   Disclosure; Fig 1A-F; 68pp; English.
XX
CC   The present sequence encodes a Hepatitis C virus (HCV) protease. The
CC   protein is encoded by sequences within the NS3 domain. The protease is
CC   believed to cleave itself from the genomic polyprotein. In the absence of
CC   protease activity, the HCV polyprotein should remain in its unprocessed
CC   form, and thus render the virus non-infectious. Inhibitors of protease
CC   activity should therefore also inhibit viral infectivity. The protease is
CC   used for assaying compounds for activity against HCV. (Updated on 27-AUG-
CC   2003 to correct OS field.)
XX
SQ   Sequence 2064 BP; 413 A; 641 C; 583 G; 427 T; 0 U; 0 Other;

  Query Match             2.7%;  Score 56;  DB 2;  Length 2064;
  Best Local Similarity   100.0%;  Pred. No. 9.7e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 596


RESULT 44
AAX26390
ID   AAX26390 standard; DNA; 2064 BP.
XX
AC   AAX26390;
XX
DT   26-MAY-1999  (first entry)
XX
DE   DNA encoding the HCV protease of the invention.
XX
KW   HCV NS3 protease; truncation analog; HCV control; protease activity;
KW   viral infectivity; inactive non-cleaving protease; ss.
XX
OS   Hepatitis C virus.
XX
FH   Key             Location/Qualifiers
FT   CDS             7. .2064
FT                   /*tag=  a
FT                   /note= "no termination codon"
XX
PN   US5885799-A.
XX
PD   23-MAR-1999.
XX
PF   06-SEP-1996;   96US-00709177.
XX
PR   04-APR-1990;   90US-00505433.
PR   04-APR-1991;   91US-00680296.
PR   06-DEC-1994;   94US-00350884.
PR   12-MAY-1995;   95US-00440548.
XX
PA   (CHIR ) CHIRON CORP.
XX
PI   Choo Q,  Kuo G,  Houghton M;
XX
DR   WPI; 1999-228536/19.
DR   P-PSDB; AAW97601.
XX
PT   Preparation of new Hepatitis C Virus NS3 protease - useful for screening
PT   for compounds which inhibit HCV infectivity.
XX
PS   Example 4; Fig 1; 71pp; English.
XX
CC   The specification describes a method for making a purified Hepatitis C
CC   virus (HCV) NS3 protease or active truncation analog. If the HCV protease
CC   N-terminal cleavage signal is excluded (so that self-cleavage is
CC   prevented), the HCV protease remains in its unprocessed form, and renders
CC   the virus noninfectious. The protease is therefore useful for assaying
CC   pharmaceutical agents for control of HCV, as compounds which inhibit
CC   protease activity sufficiently will also inhibit viral infectivity. An
CC   inactive non-cleaving protease can be used to screen for inhibitors.
CC   Recombinant expression systems can be utilised to prepare recombinant HCV
CC   which can be used to produce monoclonal antibodies. The present sequence
CC   appears in the specification
XX
SQ   Sequence 2064 BP; 413 A; 641 C; 583 G; 427 T; 0 U; 0 Other;
```

```
  Query Match             2.7%;  Score 56;  DB 2;  Length 2064;
  Best Local Similarity   100.0%;  Pred. No. 9.7e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 596


RESULT 45
ACD44788
ID   ACD44788 standard; DNA; 2064 BP.
XX
AC   ACD44788;
XX
DT   09-SEP-2003  (first entry)
XX
DE   Hepatitis C virus (HCV) protease DNA.
XX
KW   Hepatitis C virus; HCV; protease; protease inhibition; viral infection;
KW   gene; ds.
XX
OS   Hepatitis C virus.
XX
PN   US2003027317-A1.
XX
PD   06-FEB-2003.
XX
PF   18-JUN-2001; 2001US-00884456.
XX
PR   04-APR-1990;   90US-00505433.
PR   04-APR-1991;   91US-00680296.
PR   06-DEC-1994;   94US-00350884.
PR   12-MAY-1995;   95US-00440548.
PR   06-SEP-1996;   96US-00709177.
PR   19-FEB-1999;   99US-00253230.
XX
PA   (HOUG/) HOUGHTON M.
PA   (CHOO/) CHOO Q.
PA   (KUOG/) KUO G.
XX
PI   Houghton M,  Choo Q,  Kuo G;
XX
DR   WPI; 2003-492037/58.
DR   P-PSDB; AB027012.
XX
PT   New compositions comprising a hepatitis C virus (HCV) protease
PT   polynucleotide, useful for assaying pharmaceutical agents for controlling
PT   HCV, and as compounds which inhibit the protease activity and viral
PT   infectivity.
XX
PS   Example 2; Fig 1; 41pp; English.
XX
CC   The invention describes a composition comprising a polynucleotide which
CC   encodes only the hepatitis C virus (HCV) protease or an active HCV
CC   protease analogue. The protease is useful for assaying pharmaceutical
CC   agents for controlling HCV, and as compounds which inhibit the protease
CC   activity sufficiently will also inhibit viral infectivity. This sequence
CC   encodes hepatitis C virus (HCV) protease
XX
SQ   Sequence 2064 BP; 413 A; 641 C; 583 G; 427 T; 0 U; 0 Other;

  Query Match             2.7%;  Score 56;  DB 8;  Length 2064;
  Best Local Similarity   100.0%;  Pred. No. 9.7e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 596


RESULT 46
ADA07858
ID   ADA07858 standard; cDNA; 2064 BP.
XX
AC   ADA07858;
XX
DT   06-NOV-2003  (first entry)
XX
DE   Hepatitis C virus cDNA encoding the NS3 protease.
XX
KW   ss; gene; HCV; virucide; NS3 protease; serine protease; hSOD;
KW   superoxide dismutase; yeast a-factor; interleukin-2S; ubiquitin;
KW   beta-galactosidase; beta-lactamase; horseradish peroxidase;
KW   glucose oxidase; urease; HCV infection.
XX
OS   Hepatitis C virus.
XX
PN   US2003064499-A1.
XX
PD   03-APR-2003.
XX
PF   18-JUN-2001; 2001US-00884455.
XX
PR   04-APR-1990;   90US-00505433.
PR   04-APR-1991;   91US-00680296.
PR   06-DEC-1994;   94US-00350884.
PR   12-MAY-1995;   95US-00440548.
PR   06-SEP-1996;   96US-00709177.
PR   18-FEB-1999;   99US-00253675.
XX
PA   (HOUG/) HOUGHTON M.
PA   (CHOO/) CHOO Q.
PA   (KUOG/) KUO G.
XX
PI   Houghton M,  Choo Q,  Kuo G;
XX
DR   WPI; 2003-540789/51.
DR   P-PSDB; ADA07859.
XX
PT   A composition for assaying and designing antiviral agents specific for
PT   Hepatitis C virus (HCV) comprises a purified proteolytic polypeptide from
PT   HCV or a polynucleotide which encodes HCV protease.
XX
PS   Example 2; Fig 1; 40pp; English.
XX
CC   The invention relates to a composition comprising a purified proteolytic
CC   polypeptide derived from Hepatitis C virus (HCV) or a polynucleotide
CC   which encodes only the HCV protease or an active HCV protease analogue,
CC   or which encodes a fusion protein comprising HCV protease or HCV protease
CC   analogue, and a fusion partner. Also included are a fusion protein
CC   comprising a fusion partner fused to a proteolytic polypeptide derived
CC   from HCV, a method for assaying compounds for activity against HCV
CC   (comprising providing an active HCV protease, contacting the protease
CC   with a compound capable of inhibiting serine protease activity and
CC   measuring inhibition of the proteolytic activity of the HCV protease) and
CC   an expression vector for producing HCV protease or HCV protease analogues
CC   in a host cell (comprising a polynucleotide encoding HCV protease or an
CC   HCV protease analogue, transcriptional and translational regulatory
CC   sequences functional in the host cell operably linked to the HCV protease
CC   -encoding polynucleotide and a selectable marker). The fusion partner is
CC   selected from hSOD (human superoxide dismutase), yeast a-factor,
CC   interleukin (IL)-2S, ubiquitin, beta-galactosidase, beta-lactamase,
CC   horseradish peroxidase, glucose oxidase and urease. The composition is
CC   useful in assaying and designing antiviral agents specific for HCV. The
CC   method is used in identifying antiviral agents effective for treating
CC   HCV. The present sequence is the full length cDNA encoding the HCV NS3
CC   protease.
XX
SQ   Sequence 2064 BP; 413 A; 641 C; 583 G; 427 T; 0 U; 0 Other;

  Query Match             2.7%;  Score 56;  DB 8;  Length 2064;
  Best Local Similarity   100.0%;  Pred. No. 9.7e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
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                     ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 596

RESULT 47
ABX15705
ID   ABX15705 standard; cDNA; 2073 BP.
XX
AC   ABX15705;
XX
DT   28-MAR-2003  (first entry)
XX
DE   cDNA sequence encoding hepatitis C virus NS3 and NS4A protease genes.
XX
KW   Hepatitis C; ss; viral prototoxophore; anti-viral; tumour; NS4A; virus;
KW   infection; antitumour; toxophore; human immunodeficiency virus;
KW   HIV infection; herpes simplex virus; HSV; rhinovirus; NS3 protease.
XX
OS   Hepatitis C virus.
OS   Synthetic.
XX
PN   WO200287500-A2.
XX
PD   07-NOV-2002.
XX
PF   26-APR-2002; 2002WO-US013223.
XX
PR   27-APR-2001; 2001US-0286893P.
XX
PA   (NEWB-) NEWBIOTICS INC.
XX
PI   Cathers BE,  Neuteboom STC,  Shepard HM;
XX
DR   WPI; 2003-167102/16.
XX
PT   Novel synthetic viral prototoxophore for treating viral infections, has
PT   toxin moiety incorporated into substrate domain specific for viral
PT   enzyme, bound and modified by viral enzyme to get converted into
PT   toxophore.
XX
PS   Example 1; Page 62; 66pp; English.
XX
CC   This invention relates to a novel synthetic viral prototoxophore
CC   comprising a toxin moiety operatively incorporated into a substrate
CC   domain specific for a viral enzyme. This prototoxophore may be bound and
CC   modified by the viral enzyme thus converting it to a toxophore. Also
CC   disclosed in the invention is a method for enhancing the anti-viral
CC   effect of an antiviral agent, this method comprises contacting a cell,
CC   infected with a virus or is susceptible to infection, with a
CC   prototoxophore. The invention further comprises an assay to identify anti
CC   -viral agents, comprising contacting an infected cell with a candidate
CC   agent and comparing the ability of the agent to inhibit the growth or
CC   infectivity of the virus in the cell. The prototoxophores of the
CC   invention may have virucide or antitumour activity. The prototoxophores
CC   of the invention may be useful for reducing or inhibiting viral
CC   infectivity, by contacting a cell (e.g. lymphocyte, nerve cell,
CC   connective tissue cell, muscle cell or hepatocyte) which is infected with
CC   a virus or is susceptible to infection with a virus, with an effective
CC   amount of the prototoxophore. The cells are cell lines adapted to long
CC   term continuous culture or isolated from a subject. The prototoxophore is
CC   also useful for ameliorating the severity of a viral infection in a
CC   subject, where the virus is selected from human immunodeficiency virus
CC   (HIV), herpes simplex virus (HSV), rhinovirus and hepatitis virus, by
CC   administering an effective amount of the prototoxophore to the subject.
CC   The prototoxophores of the invention are also useful for treating
CC   tumours. The present sequence represents a cDNA sequence encoding the
CC   Hepatitis C virus NS3 and NS4A protease genes for use in an assay to
CC   measure the conversion of a prototoxophore of the invention to an
CC   activated toxophore in cells transfected with this gene
XX
SQ   Sequence 2073 BP; 423 A; 635 C; 581 G; 434 T; 0 U; 0 Other;

  Query Match             2.7%;  Score 56;  DB 8;  Length 2073;
  Best Local Similarity   100.0%;  Pred. No. 9.7e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        298 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 353

RESULT 48
AAQ14358
ID   AAQ14358 standard; DNA; 2523 BP.
XX
AC   AAQ14358;
XX
DT   16-JAN-1992  (first entry)
XX
DE   HCV protease gene::hSOD leader fusion in cf1SODp600.
XX
KW   Hepatitis C virus; HCV; human superoxide dismutase; SOD; ss.
XX
OS   Hepatitis C virus.
XX
FH   Key             Location/Qualifiers
FT   Signal_peptide  1. .465
FT                   /*tag=  a
FT                   /note= "hSOD leader sequence"
FT   Misc_RNA        466. .2523
FT                   /*tag=  b
FT                   /product= "AAs 946-1630 of HCV"
XX
PN   WO9115596-A.
XX
PD   17-OCT-1991.
XX
PF   04-APR-1990;   90US-00505434.
XX
PR   04-APR-1990;   90US-00505434.
XX
PA   (PROT-) PROTOS INC.
XX
PI   Rosenberg S;
XX
DR   WPI; 1991-325236/44.
DR   P-PSDB; AAR14349.
XX
PT   Method for assaying pharmaceutical cpds. - for determining anti-Hepatitis
PT   C Virus activity, using binding affinity.
XX
PS   Example 4; Fig 10; 68pp; English.
XX
CC   The vector cf1SODp600 contains a full-length HCV protease coding sequence
CC   fused to a functional hSOD leader. The truncated protease analogue
CC   expressed by the vector is proteolitically inactive and can be used to
CC   assay a wide range of pharmaceutical agents for controlling HCV. Those
CC   agents which inhibit the protease activity sufficiently will also inhibit
CC   viral infectivity. See also AAQ14359-Q14365
XX
SQ   Sequence 2523 BP; 546 A; 722 C; 718 G; 537 T; 0 U; 0 Other;

  Query Match             2.7%;  Score 56;  DB 2;  Length 2523;
  Best Local Similarity   100.0%;  Pred. No. 9.7e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1000 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 1055

RESULT 49
AAQ80175
ID   AAQ80175 standard; DNA; 2523 BP.
XX
AC   AAQ80175;
```

Same as 5,885,789 A

XX
DT 25-MAR-2003 (revised)
DT 17-AUG-1995 (first entry)
XX
DE HCV protease/hSOD fusion protein expression vector cf1SODp600.
XX
KW Hepatitis C virus protease/hSOD fusion protein; HCV;
KW expression vector cf1SODp600; viral infectivity inhibition; ds.
XX
OS Hepatitis C virus.
XX
FH Key Location/Qualifiers
FT CDS 1. .2523
FT /*tag= a
FT sig_peptide 1. .465
FT /*tag= b
FT /label= hSOD leader
XX
PN US5371017-A.
XX
PD 06-DEC-1994.
XX
PF 04-APR-1991; 91US-00680296.
XX
PR 04-APR-1990; 90US-00505433.
XX
PA (CHIR) CHIRON CORP.
XX
PI Houghton M, Choo Q, Kuo G;
XX
DR WPI; 1995-021889/03.
DR P-PSDB; AAR68547.
XX
PT DNA encoding hepatitis C virus protease - used to produce large amts. of
PT the protease and to develop prods. for inhibition of viral infectivity.
XX
PS Claim 10; Fig 10; 69pp; English.
XX
CC AAQ80175 (which encodes AAR68547) describes the sequence of the hepatitis
CC C virus (HCV) protease/hSOD fusion protein E. coli expression vector,
CC cf1SODp600. Other claimed HCV protease fusion partners are yeast alpha-
CC factor, IL-2S, ubiquitin, beta-galactosidase, beta-lactamase, horseradish
CC peroxidase, glucose oxidase and urease. The HCV protease fusion proteins
CC can be used in the production of Abs. They can also be used for assaying
CC agents which inhibit protease activity, to identify compounds which
CC inhibit viral infectivity. (Updated on 25-MAR-2003 to correct PF field.)
XX
SQ Sequence 2523 BP; 544 A; 724 C; 718 G; 537 T; 0 U; 0 Other;

Query Match 2.7%; Score 56; DB 2; Length 2523;
Best Local Similarity 100.0%; Pred. No. 9.7e-18;
Matches 56; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 1000 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 1055

RESULT 50
AAT59261
ID AAT59261 standard; DNA; 2523 BP.
XX
AC AAT59261;
XX
DT 17-OCT-2003 (revised)
DT 25-MAR-2003 (revised)
DT 03-APR-1997 (first entry)
XX
DE cf1SODp600 encoding hSOD-HCV fusion protein.
XX
KW HCV; NS3; non-structural domain 3; protease; polyprotein; inhibitor;
KW screen; processing; infection; treatment; probe; hepatitis C virus; ss.
XX
OS Hepatitis C virus; Virus.
OS Homo sapiens.
OS Chimeric.
XX
PN US5585258-A.
XX
PD 17-DEC-1996.
XX
PF 06-DEC-1994; 94US-00350884.
XX
PR 04-APR-1990; 90US-00505433.
PR 04-APR-1991; 91US-00680296.
XX
PA (CHIR) CHIRON CORP.
XX
PI Choo Q, Kuo G, Houghton M;
XX
DR WPI; 1997-051175/05.
DR P-PSDB; AAW01701.
XX
PT Compsn. contg. hepatitis C virus NS3 domain protease and related fusion
PT proteins - useful for screening specific inhibitors, potential antiviral
PT agents, prepn. of antibodies and for cleaving specific poly:peptide(s).
XX
PS Example 4; Col 77-84; 68pp; English.
XX
CC Compsns. comprising the hepatitis C virus (HCV) NS3 domain protease or
CC its active truncation analogues are claimed. Also new are fusion proteins
CC comprising the protease (or analogues) and, e.g. human superoxide (SOD)
CC or ubiquitin. The protease is essential for polyprotein processing, and
CC thus infectivity, in HCV. The compsns. are used to screen for specific
CC inhibitors (possibly useful as antiviral agents), to generate specific
CC antibodies and to cleave specific polypeptides. HCV cDNA clones (AAT59250
CC - 56 encoding AAW01686-92 resp.) were isolated from HCV genomic library
CC using probes AAT59244-49. The clones were used in the preparation of full
CC -length SOD-protease fusion proteins. The present sequence is that of
CC vector cf1SODp600 which contains a full-length HCV protease coding
CC sequence fused to a functional hSOD leader. The resulting vector encodes
CC amino acids 1-151 of hSOD, and amino acids 946-1630 of HCV (corresponding
CC to 1-686 of AAW01693). (Updated on 25-MAR-2003 to correct PF field.)
CC (Updated on 17-OCT-2003 to standardise OS field)
XX
SQ Sequence 2523 BP; 545 A; 722 C; 719 G; 537 T; 0 U; 0 Other;

Query Match 2.7%; Score 56; DB 2; Length 2523;
Best Local Similarity 100.0%; Pred. No. 9.7e-18;
Matches 56; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 1000 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 1055

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Job time : 791 secs

GenCore version 5.1.6

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Gapop 60.0 , Gapext 60.0

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Post-processing: Listing first 1000 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	62	3.0	943	2	US-08-483-695-6	Sequence 6, Appli
2	62	3.0	943	2	US-07-965-285-6	Sequence 6, Appli
3	62	3.0	943	2	US-08-487-231-6	Sequence 6, Appli
4	62	3.0	943	3	US-09-201-912-6	Sequence 6, Appli
5	58	2.8	382	3	US-08-867-611-56	Sequence 56, Appl
6	58	2.8	382	4	US-09-690-359-56	Sequence 56, Appl
7	58	2.8	1414	3	US-08-867-611-51	Sequence 51, Appl
8	58	2.8	1414	4	US-09-690-359-51	Sequence 51, Appl
9	58	2.8	1420	3	US-08-867-611-57	Sequence 57, Appl
10	58	2.8	1420	4	US-09-690-359-57	Sequence 57, Appl
11	56	2.7	281	1	US-08-350-884-75	Sequence 75, Appl
12	56	2.7	281	1	US-08-440-548-75	Sequence 75, Appl
13	56	2.7	281	1	US-08-709-173-75	Sequence 75, Appl
14	56	2.7	281	2	US-08-709-177-75	Sequence 75, Appl
15	56	2.7	283	3	US-08-444-818-33	Sequence 33, Appl
16	56	2.7	368	1	US-08-350-884-71	Sequence 71, Appl
17	56	2.7	368	1	US-08-440-548-71	Sequence 71, Appl
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19	56	2.7	368	2	US-08-709-177-71	Sequence 71, Appl
20	56	2.7	2058	4	US-09-881-239-2	Sequence 2, Appli
21	56	2.7	2058	4	US-09-881-654-1	Sequence 1, Appli
22	56	2.7	2064	1	US-08-350-884-69	Sequence 69, Appl
23	56	2.7	2064	1	US-08-440-548-69	Sequence 69, Appl
24	56	2.7	2064	1	US-08-709-173-69	Sequence 69, Appl
25	56	2.7	2064	2	US-08-709-177-69	Sequence 69, Appl
26	56	2.7	2523	1	US-08-350-884-85	Sequence 85, Appl
27	56	2.7	2523	1	US-08-440-548-85	Sequence 85, Appl
28	56	2.7	2523	1	US-08-709-173-85	Sequence 85, Appl
29	56	2.7	2523	2	US-08-709-177-85	Sequence 85, Appl
30	56	2.7	5360	3	US-08-444-818-53	Sequence 53, Appl
31	56	2.7	6785	3	US-08-444-818-65	Sequence 65, Appl
32	56	2.7	7310	3	US-08-444-818-74	Sequence 74, Appl
33	56	2.7	8316	3	US-08-444-818-88	Sequence 88, Appl
34	56	2.7	8987	3	US-08-444-818-137	Sequence 137, App
35	56	2.7	9185	3	US-08-444-818-122	Sequence 122, App
C 36	56	2.7	9185	3	US-08-444-818-123	Sequence 123, App
37	56	2.7	9379	3	US-08-444-818-176	Sequence 176, App
38	56	2.7	9379	3	US-09-388-874-1	Sequence 1, Appli
39	56	2.7	9379	4	US-09-916-359-1	Sequence 1, Appli
40	56	2.7	9401	1	US-07-910-760-9	Sequence 9, Appli
41	56	2.7	9401	1	US-08-440-519-9	Sequence 9, Appli
42	56	2.7	9401	4	US-08-440-549-9	Sequence 9, Appli
43	56	2.7	9401	4	US-08-823-895A-25	Sequence 25, Appl
44	56	2.7	9401	5	PCT-US91-02225-9	Sequence 9, Appli
45	53	2.6	9416	4	US-08-823-895A-26	Sequence 26, Appl
46	53	2.6	9416	4	US-10-104-966-13	Sequence 13, Appl
47	53	2.6	9599	3	US-09-014-416-2	Sequence 2, Appli
48	53	2.6	9599	3	US-09-014-416-6	Sequence 6, Appli
49	53	2.6	9646	3	US-08-811-566-1	Sequence 1, Appli
50	53	2.6	9646	4	US-09-034-756-1	Sequence 1, Appli
51	53	2.6	12980	3	US-08-811-566-5	Sequence 5, Appli
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55	52	2.5	885	4	US-08-892-704-1	Sequence 1, Appli
56	50	2.4	373	4	US-08-469-260A-669	Sequence 669, App
57	50	2.4	373	4	US-08-488-446-669	Sequence 669, App
58	50	2.4	373	4	US-08-467-344A-669	Sequence 669, App
59	50	2.4	1251	3	US-08-867-611-19	Sequence 19, Appl
60	50	2.4	1251	4	US-09-690-359-19	Sequence 19, Appl
61	50	2.4	1251	5	PCT-US92-06965A-24	Sequence 24, Appl
62	44	2.1	492	3	US-08-444-818-25	Sequence 25, Appl
63	44	2.1	800	3	US-08-444-818-31	Sequence 31, Appl
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66	44	2.1	816	1	US-08-709-173-83	Sequence 83, Appl
67	44	2.1	816	2	US-08-709-177-83	Sequence 83, Appl
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69	44	2.1	2499	4	US-09-881-239-4	Sequence 4, Appli
70	44	2.1	2579	3	US-08-444-818-29	Sequence 29, Appl
71	44	2.1	3075	1	US-07-910-760-11	Sequence 11, Appl
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73	44	2.1	3075	4	US-08-440-549-11	Sequence 11, Appl
74	44	2.1	3297	4	US-09-881-654-3	Sequence 3, Appli
75	44	2.1	9401	2	US-08-432-693-1	Sequence 1, Appli
76	44	2.1	9416	3	US-08-811-566-19	Sequence 19, Appl
77	44	2.1	9416	4	US-09-034-756-19	Sequence 19, Appl
78	44	2.1	9472	4	US-08-150-204E-96	Sequence 96, Appl
79	43	2.1	347	3	US-08-444-818-35	Sequence 35, Appl
80	41	2.0	268	3	US-08-444-818-21	Sequence 21, Appl
81	41	2.0	307	3	US-08-444-818-143	Sequence 143, App
82	41	2.0	308	1	US-08-350-884-79	Sequence 79, Appl
83	41	2.0	308	1	US-08-440-548-79	Sequence 79, Appl
84	41	2.0	308	1	US-08-709-173-79	Sequence 79, Appl
85	41	2.0	308	2	US-08-709-177-79	Sequence 79, Appl
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87	41	2.0	477	1	US-07-681-703B-7	Sequence 7, Appli
88	41	2.0	477	1	US-08-184-236-7	Sequence 7, Appli
89	41	2.0	477	2	US-08-407-410B-7	Sequence 7, Appli
90	41	2.0	477	2	US-08-485-500-7	Sequence 7, Appli
91	41	2.0	477	5	PCT-US91-02370-7	Sequence 7, Appli
92	41	2.0	477	5	PCT-US94-04174-7	Sequence 7, Appli
93	41	2.0	480	3	US-08-444-818-17	Sequence 17, Appl
94	41	2.0	495	1	US-08-350-884-81	Sequence 81, Appl
95	41	2.0	495	1	US-08-440-548-81	Sequence 81, Appl
96	41	2.0	495	1	US-08-709-173-81	Sequence 81, Appl
97	41	2.0	495	2	US-08-709-177-81	Sequence 81, Appl
98	41	2.0	558	1	US-07-853-985A-9	Sequence 9, Appli
99	41	2.0	558	1	US-07-681-703B-9	Sequence 9, Appli
100	41	2.0	558	1	US-08-184-236-9	Sequence 9, Appli

101	41	2.0	558	2	US-08-407-410B-9	Sequence 9, Appli
102	41	2.0	558	2	US-08-485-500-9	Sequence 9, Appli
103	41	2.0	558	5	PCT-US91-02370-9	Sequence 9, Appli
104	41	2.0	558	5	PCT-US94-04174-9	Sequence 9, Appli
105	41	2.0	943	2	US-08-483-695-43	Sequence 43, Appl
106	41	2.0	943	2	US-07-965-285-43	Sequence 43, Appl
107	41	2.0	943	2	US-08-487-231-43	Sequence 43, Appl
108	41	2.0	943	3	US-09-201-912-43	Sequence 43, Appl
109	41	2.0	1382	3	US-08-444-818-19	Sequence 19, Appl
110	41	2.0	1932	3	US-09-128-314-1	Sequence 1, Appli
111	41	2.0	7659	3	US-09-128-314-4	Sequence 4, Appli
112	41	2.0	8157	3	US-09-128-314-3	Sequence 3, Appli
113	35	1.7	267	1	US-08-685-764-6	Sequence 6, Appli
114	35	1.7	7475	2	US-08-971-036-1	Sequence 1, Appli
115	35	1.7	7475	3	US-09-096-570-1	Sequence 1, Appli
116	35	1.7	7475	4	US-09-265-617B-1	Sequence 1, Appli

ALIGNMENTS

RESULT 1
US-08-483-695-6
; Sequence 6, Application US/08483695
; Patent No. 5866139
; GENERAL INFORMATION:
; APPLICANT: Brechot, Christian
; APPLICANT: Kremsdorf, Dina
; APPLICANT: Porchon, Colette
; TITLE OF INVENTION: Nucleotide and Peptide Sequences of a
; TITLE OF INVENTION: Hepatitis C Virus Isolate, Diagnostic and Therapeutic
; TITLE OF INVENTION: Applications
; NUMBER OF SEQUENCES: 46
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Finnegan, Henderson, Farabow, Garrett &
; ADDRESSEE: Dunner
; STREET: 1300 I Street, N.W.
; CITY: Washington
; STATE: DC
; COUNTRY: USA
; ZIP: 20005-3315
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/483,695
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/07/965,285
; FILING DATE: 18-MAR-1993
; APPLICATION NUMBER: FR 91 06 882
; FILING DATE: 06-JUN-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Meyers, Kenneth J.
; REGISTRATION NUMBER: 25,146
; REFERENCE/DOCKET NUMBER: 05286-0001-00000
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 202-408-4000
; TELEFAX: 202-408-4400
; INFORMATION FOR SEQ ID NO: 6:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 943 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: Other
; DESCRIPTION: cDNA to genomic RNA
US-08-483-695-6

Query Match 3.0%; Score 62; DB 2; Length 943;
Best Local Similarity 100.0%; Pred. No. 8.8e-22;
Matches 62; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy       1915 GGCGGCGTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTGCGTGGTCATAGTA 1974
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        630 GGCGGCGTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTGCGTGGTCATAGTA 689

Qy       1975 GG 1976
             ||
Db        690 GG 691
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RESULT 2
US-07-965-285-6
; Sequence 6, Application US/07965285
; Patent No. 5879904
; GENERAL INFORMATION:
; APPLICANT: Brechot, Christian
; APPLICANT: Kremsdorf, Dina
; APPLICANT: Porchon, Colette
; TITLE OF INVENTION: Nucleotide and Peptide Sequences of a
; TITLE OF INVENTION: Hepatitis C Virus Isolate, Diagnostic and Therapeutic
; TITLE OF INVENTION: Applications
; NUMBER OF SEQUENCES: 46
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Finnegan, Henderson, Farabow, Garrett &
; ADDRESSEE: Dunner
; STREET: 1300 I Street, N.W.
; CITY: Washington
; STATE: DC
; COUNTRY: USA
; ZIP: 20005-3315
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/965,285
; FILING DATE: 18-MAR-1993
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR 91 06 882
; FILING DATE: 06-JUN-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Meyers, Kenneth J.
; REGISTRATION NUMBER: 25,146
; REFERENCE/DOCKET NUMBER: 05286-0001-00000
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 202-408-4000
; TELEFAX: 202-408-4400
; INFORMATION FOR SEQ ID NO: 6:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 943 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: Other
; DESCRIPTION: cDNA to genomic RNA
US-07-965-285-6

Query Match 3.0%; Score 62; DB 2; Length 943;
Best Local Similarity 100.0%; Pred. No. 8.8e-22;
Matches 62; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy       1915 GGCGGCGTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTGCGTGGTCATAGTA 1974
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        630 GGCGGCGTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTGCGTGGTCATAGTA 689

Qy       1975 GG 1976
             ||
Db        690 GG 691
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RESULT 3
US-08-487-231-6
; Sequence 6, Application US/08487231
; Patent No. 5919454
;  GENERAL INFORMATION:
;    APPLICANT:  Brechot, Christian
;    APPLICANT:  Kremsdorf, Dina
;    APPLICANT:  Porchon, Colette
;    TITLE OF INVENTION:  Nucleotide and Peptide Sequences of a
;    TITLE OF INVENTION:  Hepatitis C Virus Isolate, Diagnostic and Therapeutic
;    TITLE OF INVENTION:  Applications
;    NUMBER OF SEQUENCES:  46
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Finnegan, Henderson, Farabow, Garrett &
;      ADDRESSEE:  Dunner
;      STREET:  1300 I Street, N.W.
;      CITY:  Washington
;      STATE:  DC
;      COUNTRY:  USA
;      ZIP:  20005-3315
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/487,231
;      FILING DATE:  07-JUNE-1995
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/965,285
;      FILING DATE:  18-MAR-1993
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  FR 91 06 882
;      FILING DATE:  06-JUN-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meyers, Kenneth J.
;      REGISTRATION NUMBER:  25,146
;      REFERENCE/DOCKET NUMBER:  05286-0001-02000
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  202-408-4000
;      TELEFAX:  202-408-4400
;  INFORMATION FOR SEQ ID NO:  6:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  943 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  Other
;      DESCRIPTION:  cDNA to genomic RNA
US-08-487-231-6

  Query Match             3.0%;  Score 62;  DB 2;  Length 943;
  Best Local Similarity   100.0%;  Pred. No. 8.8e-22;
  Matches   62;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1915 GGCGGCGTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTGCGTGGTCATAGTA 1974
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        630 GGCGGCGTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTGCGTGGTCATAGTA 689

Qy       1975 GG 1976
             ||
Db        690 GG 691


RESULT 4
US-09-201-912-6
; Sequence 6, Application US/09201912
; Patent No. 6210962
;  GENERAL INFORMATION:
;    APPLICANT:  Brechot, Christian
;    APPLICANT:  Kremsdorf, Dina
;    APPLICANT:  Porchon, Colette
;    TITLE OF INVENTION:  Nucleotide and Peptide Sequences of a
;    TITLE OF INVENTION:  Hepatitis C Virus Isolate, Diagnostic and Therapeutic
;    TITLE OF INVENTION:  Applications
;    NUMBER OF SEQUENCES:  46
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Finnegan, Henderson, Farabow, Garrett &
;      ADDRESSEE:  Dunner
;      STREET:  1300 I Street, N.W.
;      CITY:  Washington
;      STATE:  DC
;      COUNTRY:  USA
;      ZIP:  20005-3315
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/201,912
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/965,285
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meyers, Kenneth J.
;      REGISTRATION NUMBER:  25,146
;      REFERENCE/DOCKET NUMBER:  05286-0001-00000
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  202-408-4000
;      TELEFAX:  202-408-4400
;  INFORMATION FOR SEQ ID NO:  6:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  943 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  Other
;      DESCRIPTION:  cDNA to genomic RNA
US-09-201-912-6

  Query Match             3.0%;  Score 62;  DB 3;  Length 943;
  Best Local Similarity   100.0%;  Pred. No. 8.8e-22;
  Matches   62;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1915 GGCGGCGTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTGCGTGGTCATAGTA 1974
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        630 GGCGGCGTTCTGGCTGCTTTGGCCGCGTATTGCCTATCCACAGGCTGCGTGGTCATAGTA 689

Qy       1975 GG 1976
             ||
Db        690 GG 691


RESULT 5
US-08-867-611-56
; Sequence 56, Application US/08867611
; Patent No. 6172189
;  GENERAL INFORMATION:
;    APPLICANT:  DEVARE, SUSHIL G
;    APPLICANT:  DESAI, SURESH M
;    APPLICANT:  CASEY, JAMES M
;    APPLICANT:  DAILEY, STEPHEN H
;    APPLICANT:  DAWSON, GEORGE J
;    APPLICANT:  GUTIERREZ, ROBIN A
;    APPLICANT:  LESNIEWSKI, RICHARD R
;    APPLICANT:  STEWART, JAMES L
;    APPLICANT:  RUPPRECHT, KEVIN R
;    TITLE OF INVENTION:  HEPATITIS C ASSAY UTILIZING RECOMBINANT
;    TITLE OF INVENTION:  ANTIGENS
;    NUMBER OF SEQUENCES:  59
```

```
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  ABBOTT LABORATORIES
;      STREET:  ONE ABBOTT PARK ROAD, CHAD377/AP6D2
;      CITY:  ABBOTT PARK
;      STATE:  IL
;      COUNTRY:  USA
;      ZIP:  60064-3500
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/867,611
;      FILING DATE:  02-JUN-1997
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/646,757
;      FILING DATE:
;      APPLICATION NUMBER:  US/08/179,896
;      FILING DATE:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/572,822
;      FILING DATE:  24-AUG-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/614,069
;      FILING DATE:  07-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/748,561
;      FILING DATE:  21-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/748,565
;      FILING DATE:  21-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/748,566
;      FILING DATE:  21-AUG-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  POREMBSKI, PRISCILLA E
;      REGISTRATION NUMBER:  33,207
;      REFERENCE/DOCKET NUMBER:  4834.US.P6
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  708-937-6365
;      TELEFAX:  708-937-9556
;  INFORMATION FOR SEQ ID NO:  56:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  382 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
US-08-867-611-56

  Query Match             2.8%;  Score 58;  DB 3;  Length 382;
  Best Local Similarity   100.0%;  Pred. No. 1e-19;
  Matches   58;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1291 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 1348
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Db         33 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 90


RESULT 6
US-09-690-359-56
; Sequence 56, Application US/09690359
; Patent No. 6593083
;  GENERAL INFORMATION:
;       APPLICANT: DEVARE, SUSHIL G
;                  DESAI, SURESH M
;                  CASEY, JAMES M
;                  DAILEY, STEPHEN H
;                  DAWSON, GEORGE J
;                  GUTIERREZ, ROBIN A
;                  LESNIEWSKI, RICHARD R
;                  STEWART, JAMES L
;                  RUPPRECHT, KEVIN R
;       TITLE OF INVENTION: HEPATITIS C ASSAY UTILIZING RECOMBINANT
;                           ANTIGENS
;       NUMBER OF SEQUENCES: 59
;       CORRESPONDENCE ADDRESS:
;            ADDRESSEE: ABBOTT LABORATORIES
;            STREET: ONE ABBOTT PARK ROAD, CHAD377/AP6D2
;            CITY: ABBOTT PARK
;            STATE: IL
;            COUNTRY: USA
;            ZIP: 60064-3500
;       COMPUTER READABLE FORM:
;            MEDIUM TYPE: Floppy disk
;            COMPUTER: IBM PC compatible
;            OPERATING SYSTEM: PC-DOS/MS-DOS
;            SOFTWARE: PatentIn Release #1.0, Version #1.25
;       CURRENT APPLICATION DATA:
;            APPLICATION NUMBER: US/09/690,359
;            FILING DATE: 17-Oct-2000
;            CLASSIFICATION: <Unknown>
;       PRIOR APPLICATION DATA:
;            APPLICATION NUMBER: 08/867,611
;            FILING DATE: 02-JUN-1997
;            APPLICATION NUMBER: US/08/646,757
;            FILING DATE: <Unknown>
;            APPLICATION NUMBER: US/08/179,896
;            FILING DATE: <Unknown>
;            APPLICATION NUMBER: US 07/572,822
;            FILING DATE: 24-AUG-1990
;            APPLICATION NUMBER: US 07/614,069
;            FILING DATE: 07-NOV-1990
;            APPLICATION NUMBER: US 07/748,561
;            FILING DATE: 21-AUG-1991
;            APPLICATION NUMBER: US 07/748,565
;            FILING DATE: 21-AUG-1991
;            APPLICATION NUMBER: US 07/748,566
;            FILING DATE: 21-AUG-1991
;       ATTORNEY/AGENT INFORMATION:
;            NAME: POREMBSKI, PRISCILLA E
;            REGISTRATION NUMBER: 33,207
;            REFERENCE/DOCKET NUMBER: 4834.US.P6
;       TELECOMMUNICATION INFORMATION:
;            TELEPHONE: 708-937-6365
;            TELEFAX: 708-937-9556
;  INFORMATION FOR SEQ ID NO: 56:
;       SEQUENCE CHARACTERISTICS:
;            LENGTH: 382 base pairs
;            TYPE: nucleic acid
;            STRANDEDNESS: single
;            TOPOLOGY: linear
;       MOLECULE TYPE: DNA (genomic)
;       SEQUENCE DESCRIPTION: SEQ ID NO: 56:
US-09-690-359-56

  Query Match             2.8%;  Score 58;  DB 4;  Length 382;
  Best Local Similarity   100.0%;  Pred. No. 1e-19;
  Matches   58;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1291 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 1348
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         33 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 90


RESULT 7
US-08-867-611-51
; Sequence 51, Application US/08867611
; Patent No. 6172189
;  GENERAL INFORMATION:
;    APPLICANT:  DEVARE, SUSHIL G.
;    APPLICANT:  DESAI, SURESH M
;    APPLICANT:  CASEY, JAMES M
;    APPLICANT:  DAILEY, STEPHEN H
```

```
;    APPLICANT:  DAWSON, GEORGE J
;    APPLICANT:  GUTIERREZ, ROBIN A
;    APPLICANT:  LESNIEWSKI, RICHARD R
;    APPLICANT:  STEWART, JAMES L
;    APPLICANT:  RUPPRECHT, KEVIN R
;    TITLE OF INVENTION:  HEPATITIS C ASSAY UTILIZING RECOMBINANT
;    TITLE OF INVENTION:  ANTIGENS
;    NUMBER OF SEQUENCES:  59
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  ABBOTT LABORATORIES
;      STREET:  ONE ABBOTT PARK ROAD, CHAD377/AP6D2
;      CITY:  ABBOTT PARK
;      STATE:  IL
;      COUNTRY:  USA
;      ZIP:  60064-3500
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/867,611
;      FILING DATE:  02-JUN-1997
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/646,757
;      FILING DATE:
;      APPLICATION NUMBER:  US/08/179,896
;      FILING DATE:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/572,822
;      FILING DATE:  24-AUG-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/614,069
;      FILING DATE:  07-NOV-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/748,561
;      FILING DATE:  21-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/748,565
;      FILING DATE:  21-AUG-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/748,566
;      FILING DATE:  21-AUG-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  POREMBSKI, PRISCILLA E
;      REGISTRATION NUMBER:  33,207
;      REFERENCE/DOCKET NUMBER:  4834.US.P6
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  708-937-6365
;      TELEFAX:  708-937-9556
;  INFORMATION FOR SEQ ID NO:  51:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1414 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
US-08-867-611-51

  Query Match             2.8%;  Score 58;  DB 3;  Length 1414;
  Best Local Similarity   100.0%;  Pred. No. 9.9e-20;
  Matches   58;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1291 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 1348
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Db         22 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 79


RESULT 8
US-09-690-359-51
; Sequence 51, Application US/09690359
; Patent No. 6593083
;  GENERAL INFORMATION:
;      APPLICANT: DEVARE, SUSHIL G
;                 DESAI, SURESH M
;                 CASEY, JAMES M
;                 DAILEY, STEPHEN H
;                 DAWSON, GEORGE J
;                 GUTIERREZ, ROBIN A
;                 LESNIEWSKI, RICHARD R
;                 STEWART, JAMES L
;                 RUPPRECHT, KEVIN R
;      TITLE OF INVENTION: HEPATITIS C ASSAY UTILIZING RECOMBINANT
;                          ANTIGENS
;      NUMBER OF SEQUENCES: 59
;      CORRESPONDENCE ADDRESS:
;           ADDRESSEE: ABBOTT LABORATORIES
;           STREET: ONE ABBOTT PARK ROAD, CHAD377/AP6D2
;           CITY: ABBOTT PARK
;           STATE: IL
;           COUNTRY: USA
;           ZIP: 60064-3500
;      COMPUTER READABLE FORM:
;           MEDIUM TYPE: Floppy disk
;           COMPUTER: IBM PC compatible
;           OPERATING SYSTEM: PC-DOS/MS-DOS
;           SOFTWARE: PatentIn Release #1.0, Version #1.25
;      CURRENT APPLICATION DATA:
;           APPLICATION NUMBER: US/09/690,359
;           FILING DATE: 17-Oct-2000
;           CLASSIFICATION: <Unknown>
;      PRIOR APPLICATION DATA:
;           APPLICATION NUMBER: 08/867,611
;           FILING DATE: 02-JUN-1997
;           APPLICATION NUMBER: US/08/646,757
;           FILING DATE: <Unknown>
;           APPLICATION NUMBER: US/08/179,896
;           FILING DATE: <Unknown>
;           APPLICATION NUMBER: US 07/572,822
;           FILING DATE: 24-AUG-1990
;           APPLICATION NUMBER: US 07/614,069
;           FILING DATE: 07-NOV-1990
;           APPLICATION NUMBER: US 07/748,561
;           FILING DATE: 21-AUG-1991
;           APPLICATION NUMBER: US 07/748,565
;           FILING DATE: 21-AUG-1991
;           APPLICATION NUMBER: US 07/748,566
;           FILING DATE: 21-AUG-1991
;      ATTORNEY/AGENT INFORMATION:
;           NAME: POREMBSKI, PRISCILLA E
;           REGISTRATION NUMBER: 33,207
;           REFERENCE/DOCKET NUMBER: 4834.US.P6
;      TELECOMMUNICATION INFORMATION:
;           TELEPHONE: 708-937-6365
;           TELEFAX: 708-937-9556
;  INFORMATION FOR SEQ ID NO: 51:
;      SEQUENCE CHARACTERISTICS:
;           LENGTH: 1414 base pairs
;           TYPE: nucleic acid
;           STRANDEDNESS: single
;           TOPOLOGY: linear
;      MOLECULE TYPE: DNA (genomic)
;      SEQUENCE DESCRIPTION: SEQ ID NO: 51:
US-09-690-359-51

  Query Match             2.8%;  Score 58;  DB 4;  Length 1414;
  Best Local Similarity   100.0%;  Pred. No. 9.9e-20;
  Matches   58;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1291 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 1348
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         22 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 79


RESULT 9
```

US-08-867-611-57
; Sequence 57, Application US/08867611
; Patent No. 6172189
; GENERAL INFORMATION:
; APPLICANT: DEVARE, SUSHIL G
; APPLICANT: DESAI, SURESH M
; APPLICANT: CASEY, JAMES M
; APPLICANT: DAILEY, STEPHEN H
; APPLICANT: DAWSON, GEORGE J
; APPLICANT: GUTIERREZ, ROBIN A
; APPLICANT: LESNIEWSKI, RICHARD R
; APPLICANT: STEWART, JAMES L
; APPLICANT: RUPPRECHT, KEVIN R
; TITLE OF INVENTION: HEPATITIS C ASSAY UTILIZING RECOMBINANT
; TITLE OF INVENTION: ANTIGENS
; NUMBER OF SEQUENCES: 59
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: ABBOTT LABORATORIES
; STREET: ONE ABBOTT PARK ROAD, CHAD377/AP6D2
; CITY: ABBOTT PARK
; STATE: IL
; COUNTRY: USA
; ZIP: 60064-3500
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/867,611
; FILING DATE: 02-JUN-1997
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/646,757
; FILING DATE:
; APPLICATION NUMBER: US/08/179,896
; FILING DATE:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/572,822
; FILING DATE: 24-AUG-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/614,069
; FILING DATE: 07-NOV-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/748,561
; FILING DATE: 21-AUG-1991
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/748,565
; FILING DATE: 21-AUG-1991
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/748,566
; FILING DATE: 21-AUG-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: POREMBSKI, PRISCILLA E
; REGISTRATION NUMBER: 33,207
; REFERENCE/DOCKET NUMBER: 4834.US.P6
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 708-937-6365
; TELEFAX: 708-937-9556
; INFORMATION FOR SEQ ID NO: 57:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1420 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
US-08-867-611-57

Query Match 2.8%; Score 58; DB 3; Length 1420;
Best Local Similarity 100.0%; Pred. No. 9.9e-20;
Matches 58; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1291 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 1348
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 22 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 79

RESULT 10
US-09-690-359-57
; Sequence 57, Application US/09690359
; Patent No. 6593083
; GENERAL INFORMATION:
; APPLICANT: DEVARE, SUSHIL G
; DESAI, SURESH M
; CASEY, JAMES M
; DAILEY, STEPHEN H
; DAWSON, GEORGE J
; GUTIERREZ, ROBIN A
; LESNIEWSKI, RICHARD R
; STEWART, JAMES L
; RUPPRECHT, KEVIN R
; TITLE OF INVENTION: HEPATITIS C ASSAY UTILIZING RECOMBINANT
; ANTIGENS
; NUMBER OF SEQUENCES: 59
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: ABBOTT LABORATORIES
; STREET: ONE ABBOTT PARK ROAD, CHAD377/AP6D2
; CITY: ABBOTT PARK
; STATE: IL
; COUNTRY: USA
; ZIP: 60064-3500
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/690,359
; FILING DATE: 17-Oct-2000
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/867,611
; FILING DATE: 02-JUN-1997
; APPLICATION NUMBER: US/08/646,757
; FILING DATE: <Unknown>
; APPLICATION NUMBER: US/08/179,896
; FILING DATE: <Unknown>
; APPLICATION NUMBER: US 07/572,822
; FILING DATE: 24-AUG-1990
; APPLICATION NUMBER: US 07/614,069
; FILING DATE: 07-NOV-1990
; APPLICATION NUMBER: US 07/748,561
; FILING DATE: 21-AUG-1991
; APPLICATION NUMBER: US 07/748,565
; FILING DATE: 21-AUG-1991
; APPLICATION NUMBER: US 07/748,566
; FILING DATE: 21-AUG-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: POREMBSKI, PRISCILLA E
; REGISTRATION NUMBER: 33,207
; REFERENCE/DOCKET NUMBER: 4834.US.P6
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 708-937-6365
; TELEFAX: 708-937-9556
; INFORMATION FOR SEQ ID NO: 57:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1420 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
; SEQUENCE DESCRIPTION: SEQ ID NO: 57:
US-09-690-359-57

Query Match 2.8%; Score 58; DB 4; Length 1420;
Best Local Similarity 100.0%; Pred. No. 9.9e-20;

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  Matches   58;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1291 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 1348
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         22 ACGTGTGTCACCCAGACAGTCGACTTCAGCCTTGACCCTACCTTCACCATTGAGACAA 79


RESULT 11
US-08-350-884-75
; Sequence 75, Application US/08350884
; Patent No. 5585258
;  GENERAL INFORMATION:
;    APPLICANT:  HOUGHTON, MICHAEL
;    APPLICANT:  CHOO, QUI LIM
;    APPLICANT:  KUO, GEORGE
;    TITLE OF INVENTION:  HEPATITIS C VIRUS PROTEASE
;    NUMBER OF SEQUENCES:  86
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MORRISON & FOERSTER
;      STREET:  755 Page Mill Road
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94304-1018
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/350,884
;      FILING DATE:  06-DEC-1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/680,296
;      FILING DATE:  04-APR-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  CIOTTI, THOMAS E.
;      REGISTRATION NUMBER:  21,013
;      REFERENCE/DOCKET NUMBER:  22300-20100.20
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 813-5600
;      TELEFAX:  (415) 494-0792
;      TELEX:  706141
;  INFORMATION FOR SEQ ID NO:  75:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  281 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..279
US-08-350-884-75

  Query Match              2.7%;  Score 56;  DB 1;  Length 281;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          4 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 59


RESULT 12
US-08-440-548-75
; Sequence 75, Application US/08440548
; Patent No. 5597691
;  GENERAL INFORMATION:
;    APPLICANT:  HOUGHTON, MICHAEL
;    APPLICANT:  CHOO, QUI LIM
;    APPLICANT:  KUO, GEORGE
;    TITLE OF INVENTION:  HEPATITIS C VIRUS PROTEASE
;    NUMBER OF SEQUENCES:  86
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MORRISON & FOERSTER
;      STREET:  755 Page Mill Road
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94304-1018
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/440,548
;      FILING DATE:  12-MAY-1995
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/680,296
;      FILING DATE:  04-APR-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  CIOTTI, THOMAS E.
;      REGISTRATION NUMBER:  21,013
;      REFERENCE/DOCKET NUMBER:  22300-20100.20
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 813-5600
;      TELEFAX:  (415) 494-0792
;      TELEX:  706141
;  INFORMATION FOR SEQ ID NO:  75:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  281 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..279
US-08-440-548-75

  Query Match              2.7%;  Score 56;  DB 1;  Length 281;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          4 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 59


RESULT 13
US-08-709-173-75
; Sequence 75, Application US/08709173
; Patent No. 5712145
;  GENERAL INFORMATION:
;    APPLICANT:  HOUGHTON, MICHAEL
;    APPLICANT:  CHOO, QUI LIM
;    APPLICANT:  KUO, GEORGE
;    TITLE OF INVENTION:  HEPATITIS C VIRUS PROTEASE
;    NUMBER OF SEQUENCES:  86
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MORRISON & FOERSTER
;      STREET:  755 Page Mill Road
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94304-1018
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/709,173
;      FILING DATE:  06-SEP-1996
```

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;       CLASSIFICATION:  435
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/680,296
;       FILING DATE:  04-APR-1991
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  CIOTTI, THOMAS E.
;       REGISTRATION NUMBER:  21,013
;       REFERENCE/DOCKET NUMBER:  22300-20100.20
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (415) 813-5600
;       TELEFAX:  (415) 494-0792
;       TELEX:  706141
;   INFORMATION FOR SEQ ID NO:  75:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  281 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     FEATURE:
;       NAME/KEY:  CDS
;       LOCATION:  1..279
US-08-709-173-75

  Query Match             2.7%;  Score 56;  DB 1;  Length 281;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          4 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 59


RESULT 14
US-08-709-177-75
; Sequence 75, Application US/08709177
; Patent No. 5885799
;  GENERAL INFORMATION:
;    APPLICANT:  HOUGHTON, MICHAEL
;    APPLICANT:  CHOO, QUI LIM
;    APPLICANT:  KUO, GEORGE
;    TITLE OF INVENTION:  HEPATITIS C VIRUS PROTEASE
;    NUMBER OF SEQUENCES:  86
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MORRISON & FOERSTER
;      STREET:  755 Page Mill Road
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94304-1018
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/709,177
;      FILING DATE:  06-SEP-1996
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/680,296
;      FILING DATE:  04-APR-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  CIOTTI, THOMAS E.
;      REGISTRATION NUMBER:  21,013
;      REFERENCE/DOCKET NUMBER:  22300-20100.20
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 813-5600
;      TELEFAX:  (415) 494-0792
;      TELEX:  706141
;  INFORMATION FOR SEQ ID NO:  75:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  281 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..279
US-08-709-177-75

  Query Match             2.7%;  Score 56;  DB 2;  Length 281;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          4 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 59


RESULT 15
US-08-444-818-33
; Sequence 33, Application US/08444818
; Patent No. 6150087
;  GENERAL INFORMATION:
;    APPLICANT:  Chien, David Y.
;    APPLICANT:  Rutter, William J.
;    TITLE OF INVENTION:  NANBV Diagnostics and Vaccines
;    NUMBER OF SEQUENCES:  777
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Chiron Corporation
;      STREET:  4560 Horton Street
;      CITY:  Emeryville
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94608-2916
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/444,818
;      FILING DATE:
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/403,590
;      FILING DATE:  14-MAR-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Harbin, Alisa A.
;      REGISTRATION NUMBER:  33,895
;      REFERENCE/DOCKET NUMBER:  0110.002
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (508)359-3876
;      TELEFAX:  (508)359-3885
;  INFORMATION FOR SEQ ID NO:  33:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  283 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  3..281
US-08-444-818-33

  Query Match             2.7%;  Score 56;  DB 3;  Length 283;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          6 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 61


RESULT 16
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US-08-350-884-71
; Sequence 71, Application US/08350884
; Patent No. 5585258
; GENERAL INFORMATION:
;   APPLICANT: HOUGHTON, MICHAEL
;   APPLICANT: CHOO, QUI LIM
;   APPLICANT: KUO, GEORGE
;   TITLE OF INVENTION: HEPATITIS C VIRUS PROTEASE
;   NUMBER OF SEQUENCES: 86
;   CORRESPONDENCE ADDRESS:
;     ADDRESSEE: MORRISON & FOERSTER
;     STREET: 755 Page Mill Road
;     CITY: Palo Alto
;     STATE: California
;     COUNTRY: USA
;     ZIP: 94304-1018
;   COMPUTER READABLE FORM:
;     MEDIUM TYPE: Floppy disk
;     COMPUTER: IBM PC compatible
;     OPERATING SYSTEM: PC-DOS/MS-DOS
;     SOFTWARE: PatentIn Release #1.0, Version #1.25
;   CURRENT APPLICATION DATA:
;     APPLICATION NUMBER: US/08/350,884
;     FILING DATE: 06-DEC-1994
;     CLASSIFICATION: 435
;   PRIOR APPLICATION DATA:
;     APPLICATION NUMBER: US 07/680,296
;     FILING DATE: 04-APR-1991
;   ATTORNEY/AGENT INFORMATION:
;     NAME: CIOTTI, THOMAS E.
;     REGISTRATION NUMBER: 21,013
;     REFERENCE/DOCKET NUMBER: 22300-20100.20
;   TELECOMMUNICATION INFORMATION:
;     TELEPHONE: (415) 813-5600
;     TELEFAX: (415) 494-0792
;     TELEX: 706141
; INFORMATION FOR SEQ ID NO: 71:
;   SEQUENCE CHARACTERISTICS:
;     LENGTH: 368 base pairs
;     TYPE: nucleic acid
;     STRANDEDNESS: single
;     TOPOLOGY: linear
;   FEATURE:
;     NAME/KEY: CDS
;     LOCATION: 1..366
US-08-350-884-71

  Query Match              2.7%;  Score 56;  DB 1;  Length 368;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        220 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 275


RESULT 17
US-08-440-548-71
; Sequence 71, Application US/08440548
; Patent No. 5597691
; GENERAL INFORMATION:
;   APPLICANT: HOUGHTON, MICHAEL
;   APPLICANT: CHOO, QUI LIM
;   APPLICANT: KUO, GEORGE
;   TITLE OF INVENTION: HEPATITIS C VIRUS PROTEASE
;   NUMBER OF SEQUENCES: 86
;   CORRESPONDENCE ADDRESS:
;     ADDRESSEE: MORRISON & FOERSTER
;     STREET: 755 Page Mill Road
;     CITY: Palo Alto
;     STATE: California
;     COUNTRY: USA
;     ZIP: 94304-1018
;   COMPUTER READABLE FORM:
;     MEDIUM TYPE: Floppy disk
;     COMPUTER: IBM PC compatible
;     OPERATING SYSTEM: PC-DOS/MS-DOS
;     SOFTWARE: PatentIn Release #1.0, Version #1.25
;   CURRENT APPLICATION DATA:
;     APPLICATION NUMBER: US/08/440,548
;     FILING DATE: 12-MAY-1995
;     CLASSIFICATION: 435
;   PRIOR APPLICATION DATA:
;     APPLICATION NUMBER: US 07/680,296
;     FILING DATE: 04-APR-1991
;   ATTORNEY/AGENT INFORMATION:
;     NAME: CIOTTI, THOMAS E.
;     REGISTRATION NUMBER: 21,013
;     REFERENCE/DOCKET NUMBER: 22300-20100.20
;   TELECOMMUNICATION INFORMATION:
;     TELEPHONE: (415) 813-5600
;     TELEFAX: (415) 494-0792
;     TELEX: 706141
; INFORMATION FOR SEQ ID NO: 71:
;   SEQUENCE CHARACTERISTICS:
;     LENGTH: 368 base pairs
;     TYPE: nucleic acid
;     STRANDEDNESS: single
;     TOPOLOGY: linear
;   FEATURE:
;     NAME/KEY: CDS
;     LOCATION: 1..366
US-08-440-548-71

  Query Match              2.7%;  Score 56;  DB 1;  Length 368;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        220 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 275


RESULT 18
US-08-709-173-71
; Sequence 71, Application US/08709173
; Patent No. 5712145
; GENERAL INFORMATION:
;   APPLICANT: HOUGHTON, MICHAEL
;   APPLICANT: CHOO, QUI LIM
;   APPLICANT: KUO, GEORGE
;   TITLE OF INVENTION: HEPATITIS C VIRUS PROTEASE
;   NUMBER OF SEQUENCES: 86
;   CORRESPONDENCE ADDRESS:
;     ADDRESSEE: MORRISON & FOERSTER
;     STREET: 755 Page Mill Road
;     CITY: Palo Alto
;     STATE: California
;     COUNTRY: USA
;     ZIP: 94304-1018
;   COMPUTER READABLE FORM:
;     MEDIUM TYPE: Floppy disk
;     COMPUTER: IBM PC compatible
;     OPERATING SYSTEM: PC-DOS/MS-DOS
;     SOFTWARE: PatentIn Release #1.0, Version #1.25
;   CURRENT APPLICATION DATA:
;     APPLICATION NUMBER: US/08/709,173
;     FILING DATE: 06-SEP-1996
;     CLASSIFICATION: 435
;   PRIOR APPLICATION DATA:
;     APPLICATION NUMBER: US 07/680,296
;     FILING DATE: 04-APR-1991
;   ATTORNEY/AGENT INFORMATION:
;     NAME: CIOTTI, THOMAS E.
;     REGISTRATION NUMBER: 21,013
;     REFERENCE/DOCKET NUMBER: 22300-20100.20
```

```
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 813-5600
;      TELEFAX:  (415) 494-0792
;      TELEX:  706141
;  INFORMATION FOR SEQ ID NO:  71:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  368 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..366
US-08-709-173-71

  Query Match             2.7%;  Score 56;  DB 1;  Length 368;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        220 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 275


RESULT 19
US-08-709-177-71
; Sequence 71, Application US/08709177
; Patent No. 6065799
;  GENERAL INFORMATION:
;    APPLICANT:  HOUGHTON, MICHAEL
;    APPLICANT:  CHOO, QUI LIM
;    APPLICANT:  KUO, GEORGE
;    TITLE OF INVENTION:  HEPATITIS C VIRUS PROTEASE
;    NUMBER OF SEQUENCES:  86
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MORRISON & FOERSTER
;      STREET:  755 Page Mill Road
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94304-1018
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/709,177
;      FILING DATE:  06-SEP-1996
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/680,296
;      FILING DATE:  04-APR-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  CIOTTI, THOMAS E.
;      REGISTRATION NUMBER:  21,013
;      REFERENCE/DOCKET NUMBER:  22300-20100.20
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 813-5600
;      TELEFAX:  (415) 494-0792
;      TELEX:  706141
;  INFORMATION FOR SEQ ID NO:  71:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  368 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..366
US-08-709-177-71

  Query Match             2.7%;  Score 56;  DB 2;  Length 368;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        220 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 275


RESULT 20
US-09-881-239-2
; Sequence 2, Application US/09881239
; Patent No. 6630298
; GENERAL INFORMATION:
;  APPLICANT: CHIEN, David Y.
;  APPLICANT:  ARCANGEL, Phillip
;  APPLICANT:  TANDESKE, Laura
;  APPLICANT:  GEORGE-NASCIEMENTO, Carlos
;  APPLICANT:  COIT, Doris
;  APPLICANT:  MEDINA-SELBY, Angelica
;  TITLE OF INVENTION: HCV ANTIGEN/ANTIBODY COMBINATION ASSAY
;  FILE REFERENCE: 2302-16073 / PP16073.003
;  CURRENT APPLICATION NUMBER: US/09/881,239
;  CURRENT FILING DATE:  2001-06-14
;  NUMBER OF SEQ ID NOS: 8
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2
;    LENGTH: 2058
;    TYPE: DNA
;    ORGANISM: Artificial Sequence
;    FEATURE:
;    OTHER INFORMATION: Description of Artificial Sequence:
;    OTHER INFORMATION: representative NS3/4a conformational antigen
;    NAME/KEY: CDS
;    LOCATION: (1)..(2058)
US-09-881-239-2

  Query Match             2.7%;  Score 56;  DB 4;  Length 2058;
  Best Local Similarity   100.0%;  Pred. No. 1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347


RESULT 21
US-09-881-654-1
; Sequence 1, Application US/09881654
; Patent No. 6632601
; GENERAL INFORMATION:
;  APPLICANT: CHIEN, David Y.
;  APPLICANT:  ARCANGEL, Phillip
;  APPLICANT:  TANDESKE, Laura
;  APPLICANT:  GEORGE-NASCIEMENTO, Carlos
;  APPLICANT:  COLT, Doris
;  APPLICANT:  MEDINA-SELBY, Angelica
;  TITLE OF INVENTION: IMMUNOASSAYS FOR ANTI-HCV ANTIBODIES
;  FILE REFERENCE: 2302-17039 / PP17039.002
;  CURRENT APPLICATION NUMBER: US/09/881,654
;  CURRENT FILING DATE:  2001-06-14
;  PRIOR APPLICATION NUMBER: 60/212,082
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/280,811
;  PRIOR FILING DATE: 2001-04-02
;  PRIOR APPLICATION NUMBER: 60/280,867
;  PRIOR FILING DATE: 2001-04-02
;  NUMBER OF SEQ ID NOS: 7
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
;    LENGTH: 2058
;    TYPE: DNA
;    ORGANISM: Artificial Sequence
;    FEATURE:
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;   OTHER INFORMATION: Description of Artificial Sequence:
;   OTHER INFORMATION: representative NS3/4a conformational antigen
;   NAME/KEY: CDS
;   LOCATION: (1)..(2058)
US-09-881-654-1

  Query Match             2.7%;  Score 56;  DB 4;  Length 2058;
  Best Local Similarity   100.0%;  Pred. No. 1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347


RESULT 22
US-08-350-884-69
; Sequence 69, Application US/08350884
; Patent No. 5585258
;  GENERAL INFORMATION:
;    APPLICANT:  HOUGHTON, MICHAEL
;    APPLICANT:  CHOO, QUI LIM
;    APPLICANT:  KUO, GEORGE
;    TITLE OF INVENTION:  HEPATITIS C VIRUS PROTEASE
;    NUMBER OF SEQUENCES:  86
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MORRISON & FOERSTER
;      STREET:  755 Page Mill Road
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94304-1018
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/350,884
;      FILING DATE:  06-DEC-1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/680,296
;      FILING DATE:  04-APR-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  CIOTTI, THOMAS E.
;      REGISTRATION NUMBER:  21,013
;      REFERENCE/DOCKET NUMBER:  22300-20100.20
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 813-5600
;      TELEFAX:  (415) 494-0792
;      TELEX:  706141
;  INFORMATION FOR SEQ ID NO:  69:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  2064 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  7..2064
US-08-350-884-69

  Query Match             2.7%;  Score 56;  DB 1;  Length 2064;
  Best Local Similarity   100.0%;  Pred. No. 1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      541 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 596


RESULT 23
US-08-440-548-69
; Sequence 69, Application US/08440548
; Patent No. 5597691
;  GENERAL INFORMATION:
;    APPLICANT:  HOUGHTON, MICHAEL
;    APPLICANT:  CHOO, QUI LIM
;    APPLICANT:  KUO, GEORGE
;    TITLE OF INVENTION:  HEPATITIS C VIRUS PROTEASE
;    NUMBER OF SEQUENCES:  86
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MORRISON & FOERSTER
;      STREET:  755 Page Mill Road
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94304-1018
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/440,548
;      FILING DATE:  12-MAY-1995
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/680,296
;      FILING DATE:  04-APR-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  CIOTTI, THOMAS E.
;      REGISTRATION NUMBER:  21,013
;      REFERENCE/DOCKET NUMBER:  22300-20100.20
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 813-5600
;      TELEFAX:  (415) 494-0792
;      TELEX:  706141
;  INFORMATION FOR SEQ ID NO:  69:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  2064 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  7..2064
US-08-440-548-69

  Query Match             2.7%;  Score 56;  DB 1;  Length 2064;
  Best Local Similarity   100.0%;  Pred. No. 1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      541 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 596


RESULT 24
US-08-709-173-69
; Sequence 69, Application US/08709173
; Patent No. 5712145
;  GENERAL INFORMATION:
;    APPLICANT:  HOUGHTON, MICHAEL
;    APPLICANT:  CHOO, QUI LIM
;    APPLICANT:  KUO, GEORGE
;    TITLE OF INVENTION:  HEPATITIS C VIRUS PROTEASE
;    NUMBER OF SEQUENCES:  86
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MORRISON & FOERSTER
;      STREET:  755 Page Mill Road
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94304-1018
```

```
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/709,173
;      FILING DATE:  06-SEP-1996
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/680,296
;      FILING DATE:  04-APR-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  CIOTTI, THOMAS E.
;      REGISTRATION NUMBER:  21,013
;      REFERENCE/DOCKET NUMBER:  22300-20100.20
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 813-5600
;      TELEFAX:  (415) 494-0792
;      TELEX:  706141
;  INFORMATION FOR SEQ ID NO:  69:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  2064 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  7..2064
US-08-709-173-69

  Query Match             2.7%;  Score 56;  DB 1;  Length 2064;
  Best Local Similarity   100.0%;  Pred. No. 1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 596


RESULT 25
US-08-709-177-69
; Sequence 69, Application US/08709177
; Patent No. 5885799
;  GENERAL INFORMATION:
;    APPLICANT:  HOUGHTON, MICHAEL
;    APPLICANT:  CHOO, QUI LIM
;    APPLICANT:  KUO, GEORGE
;    TITLE OF INVENTION:  HEPATITIS C VIRUS PROTEASE
;    NUMBER OF SEQUENCES:  86
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MORRISON & FOERSTER
;      STREET:  755 Page Mill Road
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94304-1018
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/709,177
;      FILING DATE:  06-SEP-1996
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/680,296
;      FILING DATE:  04-APR-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  CIOTTI, THOMAS E.
;      REGISTRATION NUMBER:  21,013
;      REFERENCE/DOCKET NUMBER:  22300-20100.20
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 813-5600
;      TELEFAX:  (415) 494-0792
;      TELEX:  706141
;  INFORMATION FOR SEQ ID NO:  69:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  2064 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  7..2064
US-08-709-177-69

  Query Match             2.7%;  Score 56;  DB 2;  Length 2064;
  Best Local Similarity   100.0%;  Pred. No. 1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 596


RESULT 26
US-08-350-884-85
; Sequence 85, Application US/08350884
; Patent No. 5585258
;  GENERAL INFORMATION:
;    APPLICANT:  HOUGHTON, MICHAEL
;    APPLICANT:  CHOO, QUI LIM
;    APPLICANT:  KUO, GEORGE
;    TITLE OF INVENTION:  HEPATITIS C VIRUS PROTEASE
;    NUMBER OF SEQUENCES:  86
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MORRISON & FOERSTER
;      STREET:  755 Page Mill Road
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94304-1018
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/350,884
;      FILING DATE:  06-DEC-1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/680,296
;      FILING DATE:  04-APR-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  CIOTTI, THOMAS E.
;      REGISTRATION NUMBER:  21,013
;      REFERENCE/DOCKET NUMBER:  22300-20100.20
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 813-5600
;      TELEFAX:  (415) 494-0792
;      TELEX:  706141
;  INFORMATION FOR SEQ ID NO:  85:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  2523 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..2523
US-08-350-884-85

  Query Match             2.7%;  Score 56;  DB 1;  Length 2523;
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```
  Best Local Similarity   100.0%;  Pred. No. 1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1000 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 1055


RESULT 27
US-08-440-548-85
; Sequence 85, Application US/08440548
; Patent No. 5597691
;  GENERAL INFORMATION:
;    APPLICANT:  HOUGHTON, MICHAEL
;    APPLICANT:  CHOO, QUI LIM
;    APPLICANT:  KUO, GEORGE
;    TITLE OF INVENTION:  HEPATITIS C VIRUS PROTEASE
;    NUMBER OF SEQUENCES:  86
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MORRISON & FOERSTER
;      STREET:  755 Page Mill Road
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94304-1018
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/440,548
;      FILING DATE:  12-MAY-1995
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/680,296
;      FILING DATE:  04-APR-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  CIOTTI, THOMAS E.
;      REGISTRATION NUMBER:  21,013
;      REFERENCE/DOCKET NUMBER:  22300-20100.20
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 813-5600
;      TELEFAX:  (415) 494-0792
;      TELEX:  706141
;  INFORMATION FOR SEQ ID NO:  85:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  2523 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..2523
US-08-440-548-85

  Query Match             2.7%;  Score 56;  DB 1;  Length 2523;
  Best Local Similarity   100.0%;  Pred. No. 1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1000 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 1055


RESULT 28
US-08-709-173-85
; Sequence 85, Application US/08709173
; Patent No. 5712145
;  GENERAL INFORMATION:
;    APPLICANT:  HOUGHTON, MICHAEL
;    APPLICANT:  CHOO, QUI LIM
;    APPLICANT:  KUO, GEORGE
;    TITLE OF INVENTION:  HEPATITIS C VIRUS PROTEASE
;    NUMBER OF SEQUENCES:  86
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MORRISON & FOERSTER
;      STREET:  755 Page Mill Road
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94304-1018
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/709,173
;      FILING DATE:  06-SEP-1996
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/680,296
;      FILING DATE:  04-APR-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  CIOTTI, THOMAS E.
;      REGISTRATION NUMBER:  21,013
;      REFERENCE/DOCKET NUMBER:  22300-20100.20
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 813-5600
;      TELEFAX:  (415) 494-0792
;      TELEX:  706141
;  INFORMATION FOR SEQ ID NO:  85:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  2523 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..2523
US-08-709-173-85

  Query Match             2.7%;  Score 56;  DB 1;  Length 2523;
  Best Local Similarity   100.0%;  Pred. No. 1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1000 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 1055


RESULT 29
US-08-709-177-85
; Sequence 85, Application US/08709177
; Patent No. 5885799
;  GENERAL INFORMATION:
;    APPLICANT:  HOUGHTON, MICHAEL
;    APPLICANT:  CHOO, QUI LIM
;    APPLICANT:  KUO, GEORGE
;    TITLE OF INVENTION:  HEPATITIS C VIRUS PROTEASE
;    NUMBER OF SEQUENCES:  86
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MORRISON & FOERSTER
;      STREET:  755 Page Mill Road
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94304-1018
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/709,177
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;       FILING DATE:  06-SEP-1996
;       CLASSIFICATION:  435
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/680,296
;       FILING DATE:  04-APR-1991
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  CIOTTI, THOMAS E.
;       REGISTRATION NUMBER:  21,013
;       REFERENCE/DOCKET NUMBER:  22300-20100.20
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (415) 813-5600
;       TELEFAX:  (415) 494-0792
;       TELEX:  706141
;   INFORMATION FOR SEQ ID NO:  85:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  2523 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     FEATURE:
;       NAME/KEY:  CDS
;       LOCATION:  1..2523
US-08-709-177-85

  Query Match             2.7%;  Score 56;  DB 2;  Length 2523;
  Best Local Similarity   100.0%;  Pred. No. 1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1000 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 1055


RESULT 30
US-08-444-818-53
; Sequence 53, Application US/08444818
; Patent No. 6150087
;  GENERAL INFORMATION:
;    APPLICANT:  Chien, David Y.
;    APPLICANT:  Rutter, William J.
;    TITLE OF INVENTION:  NANBV Diagnostics and Vaccines
;    NUMBER OF SEQUENCES:  777
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Chiron Corporation
;      STREET:  4560 Horton Street
;      CITY:  Emeryville
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94608-2916
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/444,818
;      FILING DATE:
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/403,590
;      FILING DATE:  14-MAR-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Harbin, Alisa A.
;      REGISTRATION NUMBER:  33,895
;      REFERENCE/DOCKET NUMBER:  0110.002
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (508)359-3876
;      TELEFAX:  (508)359-3885
;  INFORMATION FOR SEQ ID NO:  53:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  5360 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  3..5360
US-08-444-818-53

  Query Match             2.7%;  Score 56;  DB 3;  Length 5360;
  Best Local Similarity   100.0%;  Pred. No. 1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1221 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 1276


RESULT 31
US-08-444-818-65
; Sequence 65, Application US/08444818
; Patent No. 6150087
;  GENERAL INFORMATION:
;    APPLICANT:  Chien, David Y.
;    APPLICANT:  Rutter, William J.
;    TITLE OF INVENTION:  NANBV Diagnostics and Vaccines
;    NUMBER OF SEQUENCES:  777
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Chiron Corporation
;      STREET:  4560 Horton Street
;      CITY:  Emeryville
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94608-2916
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/444,818
;      FILING DATE:
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/403,590
;      FILING DATE:  14-MAR-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Harbin, Alisa A.
;      REGISTRATION NUMBER:  33,895
;      REFERENCE/DOCKET NUMBER:  0110.002
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (508)359-3876
;      TELEFAX:  (508)359-3885
;  INFORMATION FOR SEQ ID NO:  65:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  6785 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  3..6785
US-08-444-818-65

  Query Match             2.7%;  Score 56;  DB 3;  Length 6785;
  Best Local Similarity   100.0%;  Pred. No. 1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1494 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 1549


RESULT 32
```

```
US-08-444-818-74
; Sequence 74, Application US/08444818
; Patent No. 6150087
; GENERAL INFORMATION:
;   APPLICANT: Chien, David Y.
;   APPLICANT: Rutter, William J.
;   TITLE OF INVENTION: NANBV Diagnostics and Vaccines
;   NUMBER OF SEQUENCES: 777
;   CORRESPONDENCE ADDRESS:
;     ADDRESSEE: Chiron Corporation
;     STREET: 4560 Horton Street
;     CITY: Emeryville
;     STATE: CA
;     COUNTRY: USA
;     ZIP: 94608-2916
;   COMPUTER READABLE FORM:
;     MEDIUM TYPE: Floppy disk
;     COMPUTER: IBM PC compatible
;     OPERATING SYSTEM: PC-DOS/MS-DOS
;     SOFTWARE: PatentIn Release #1.0, Version #1.30
;   CURRENT APPLICATION DATA:
;     APPLICATION NUMBER: US/08/444,818
;     FILING DATE:
;     CLASSIFICATION: 424
;   PRIOR APPLICATION DATA:
;     APPLICATION NUMBER: US/08/403,590
;     FILING DATE: 14-MAR-1995
;   ATTORNEY/AGENT INFORMATION:
;     NAME: Harbin, Alisa A.
;     REGISTRATION NUMBER: 33,895
;     REFERENCE/DOCKET NUMBER: 0110.002
;   TELECOMMUNICATION INFORMATION:
;     TELEPHONE: (508)359-3876
;     TELEFAX: (508)359-3885
;  INFORMATION FOR SEQ ID NO: 74:
;   SEQUENCE CHARACTERISTICS:
;     LENGTH: 7310 base pairs
;     TYPE: nucleic acid
;     STRANDEDNESS: single
;     TOPOLOGY: linear
;   MOLECULE TYPE: cDNA
;   FEATURE:
;     NAME/KEY: CDS
;     LOCATION: 3..7310
US-08-444-818-74

  Query Match             2.7%;  Score 56;  DB 3;  Length 7310;
  Best Local Similarity   100.0%;  Pred. No. 1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2019 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 2074


RESULT 33
US-08-444-818-88
; Sequence 88, Application US/08444818
; Patent No. 6150087
; GENERAL INFORMATION:
;   APPLICANT: Chien, David Y.
;   APPLICANT: Rutter, William J.
;   TITLE OF INVENTION: NANBV Diagnostics and Vaccines
;   NUMBER OF SEQUENCES: 777
;   CORRESPONDENCE ADDRESS:
;     ADDRESSEE: Chiron Corporation
;     STREET: 4560 Horton Street
;     CITY: Emeryville
;     STATE: CA
;     COUNTRY: USA
;     ZIP: 94608-2916
;   COMPUTER READABLE FORM:
;     MEDIUM TYPE: Floppy disk
;     COMPUTER: IBM PC compatible
;     OPERATING SYSTEM: PC-DOS/MS-DOS
;     SOFTWARE: PatentIn Release #1.0, Version #1.30
;   CURRENT APPLICATION DATA:
;     APPLICATION NUMBER: US/08/444,818
;     FILING DATE:
;     CLASSIFICATION: 424
;   PRIOR APPLICATION DATA:
;     APPLICATION NUMBER: US/08/403,590
;     FILING DATE: 14-MAR-1995
;   ATTORNEY/AGENT INFORMATION:
;     NAME: Harbin, Alisa A.
;     REGISTRATION NUMBER: 33,895
;     REFERENCE/DOCKET NUMBER: 0110.002
;   TELECOMMUNICATION INFORMATION:
;     TELEPHONE: (508)359-3876
;     TELEFAX: (508)359-3885
;  INFORMATION FOR SEQ ID NO: 88:
;   SEQUENCE CHARACTERISTICS:
;     LENGTH: 8316 base pairs
;     TYPE: nucleic acid
;     STRANDEDNESS: single
;     TOPOLOGY: linear
;   MOLECULE TYPE: cDNA
;   FEATURE:
;     NAME/KEY: CDS
;     LOCATION: 1..8316
US-08-444-818-88

  Query Match             2.7%;  Score 56;  DB 3;  Length 8316;
  Best Local Similarity   100.0%;  Pred. No. 1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       3025 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 3080


RESULT 34
US-08-444-818-137
; Sequence 137, Application US/08444818
; Patent No. 6150087
; GENERAL INFORMATION:
;   APPLICANT: Chien, David Y.
;   APPLICANT: Rutter, William J.
;   TITLE OF INVENTION: NANBV Diagnostics and Vaccines
;   NUMBER OF SEQUENCES: 777
;   CORRESPONDENCE ADDRESS:
;     ADDRESSEE: Chiron Corporation
;     STREET: 4560 Horton Street
;     CITY: Emeryville
;     STATE: CA
;     COUNTRY: USA
;     ZIP: 94608-2916
;   COMPUTER READABLE FORM:
;     MEDIUM TYPE: Floppy disk
;     COMPUTER: IBM PC compatible
;     OPERATING SYSTEM: PC-DOS/MS-DOS
;     SOFTWARE: PatentIn Release #1.0, Version #1.30
;   CURRENT APPLICATION DATA:
;     APPLICATION NUMBER: US/08/444,818
;     FILING DATE:
;     CLASSIFICATION: 424
;   PRIOR APPLICATION DATA:
;     APPLICATION NUMBER: US/08/403,590
;     FILING DATE: 14-MAR-1995
;   ATTORNEY/AGENT INFORMATION:
;     NAME: Harbin, Alisa A.
;     REGISTRATION NUMBER: 33,895
;     REFERENCE/DOCKET NUMBER: 0110.002
;   TELECOMMUNICATION INFORMATION:
;     TELEPHONE: (508)359-3876
;     TELEFAX: (508)359-3885
```

```
;  INFORMATION FOR SEQ ID NO:  137:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  8987 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..8985
US-08-444-818-137

  Query Match             2.7%;  Score 56;  DB 3;  Length 8987;
  Best Local Similarity   100.0%;  Pred. No. 1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       3367 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 3422


RESULT 35
US-08-444-818-122
; Sequence 122, Application US/08444818
; Patent No. 6150087
;  GENERAL INFORMATION:
;    APPLICANT:  Chien, David Y.
;    APPLICANT:  Rutter, William J.
;    TITLE OF INVENTION:  NANBV Diagnostics and Vaccines
;    NUMBER OF SEQUENCES:  777
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Chiron Corporation
;      STREET:  4560 Horton Street
;      CITY:  Emeryville
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94608-2916
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/444,818
;      FILING DATE:
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/403,590
;      FILING DATE:  14-MAR-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Harbin, Alisa A.
;      REGISTRATION NUMBER:  33,895
;      REFERENCE/DOCKET NUMBER:  0110.002
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (508)359-3876
;      TELEFAX:  (508)359-3885
;  INFORMATION FOR SEQ ID NO:  122:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  9185 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
US-08-444-818-122

  Query Match             2.7%;  Score 56;  DB 3;  Length 9185;
  Best Local Similarity   100.0%;  Pred. No. 1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       3686 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 3741


RESULT 36
US-08-444-818-123/c
; Sequence 123, Application US/08444818
; Patent No. 6150087
;  GENERAL INFORMATION:
;    APPLICANT:  Chien, David Y.
;    APPLICANT:  Rutter, William J.
;    TITLE OF INVENTION:  NANBV Diagnostics and Vaccines
;    NUMBER OF SEQUENCES:  777
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Chiron Corporation
;      STREET:  4560 Horton Street
;      CITY:  Emeryville
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94608-2916
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/444,818
;      FILING DATE:
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/403,590
;      FILING DATE:  14-MAR-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Harbin, Alisa A.
;      REGISTRATION NUMBER:  33,895
;      REFERENCE/DOCKET NUMBER:  0110.002
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (508)359-3876
;      TELEFAX:  (508)359-3885
;  INFORMATION FOR SEQ ID NO:  123:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  9185 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    ANTI-SENSE:  YES
US-08-444-818-123

  Query Match             2.7%;  Score 56;  DB 3;  Length 9185;
  Best Local Similarity   100.0%;  Pred. No. 1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       5500 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 5445


RESULT 37
US-08-444-818-176
; Sequence 176, Application US/08444818
; Patent No. 6150087
;  GENERAL INFORMATION:
;    APPLICANT:  Chien, David Y.
;    APPLICANT:  Rutter, William J.
;    TITLE OF INVENTION:  NANBV Diagnostics and Vaccines
;    NUMBER OF SEQUENCES:  777
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Chiron Corporation
;      STREET:  4560 Horton Street
;      CITY:  Emeryville
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94608-2916
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
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; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/444,818
; FILING DATE:
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/403,590
; FILING DATE: 14-MAR-1995
; ATTORNEY/AGENT INFORMATION:
; NAME: Harbin, Alisa A.
; REGISTRATION NUMBER: 33,895
; REFERENCE/DOCKET NUMBER: 0110.002
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (508)359-3876
; TELEFAX: (508)359-3885
; INFORMATION FOR SEQ ID NO: 176:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 9379 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 345
; OTHER INFORMATION: /note= "A heterogeneity may exist
; OTHER INFORMATION: at this position which is A or G"
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 351
; OTHER INFORMATION: /note= "A heterogeneity may exist
; OTHER INFORMATION: at this position which is A or C"
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 846
; OTHER INFORMATION: /note= "A heterogeneity may exist
; OTHER INFORMATION: at this position which is T or C"
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 1319
; OTHER INFORMATION: /note= "A heterogeneity may exist
; OTHER INFORMATION: at this position which is A or G"
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 2126
; OTHER INFORMATION: /note= "A heterogeneity may exist
; OTHER INFORMATION: at this position which is A or C"
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 3659
; OTHER INFORMATION: /note= "A heterogeneity may exist
; OTHER INFORMATION: at this position which is C or T"
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 3669
; OTHER INFORMATION: /note= "A heterogeneity may exist
; OTHER INFORMATION: at this position which is G or C"
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 4146
; OTHER INFORMATION: /note= "A heterogeneity may exist
; OTHER INFORMATION: at this position which is C or T"
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 4680
; OTHER INFORMATION: /note= "A heterogeneity may exist
; OTHER INFORMATION: at this position which is G or A"
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 9080
; OTHER INFORMATION: /note= "A heterogeneity may exist

; OTHER INFORMATION: at this position which is A or G"
US-08-444-818-176

  Query Match 2.7%; Score 56; DB 3; Length 9379;
  Best Local Similarity 100.0%; Pred. No. 1e-18;
  Matches 56; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 3686 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 3741

RESULT 38
US-09-388-874-1
; Sequence 1, Application US/09388874
; Patent No. 6284249
; GENERAL INFORMATION:
; APPLICANT: Veronique Barban
; TITLE OF INVENTION: VACCINE COMPOSITION FOR PREVENTING OR
; TITLE OF INVENTION: TREATING C HEPATITIS
; FILE REFERENCE: PMCF97-03A
; CURRENT APPLICATION NUMBER: US/09/388,874
; CURRENT FILING DATE: 1999-09-02
; EARLIER APPLICATION NUMBER: PCT/FR98/00448
; EARLIER FILING DATE: 1998-03-06
; EARLIER APPLICATION NUMBER: 97/02,887
; EARLIER FILING DATE: 1997-03-06
; NUMBER OF SEQ ID NOS: 2
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 1
; LENGTH: 9379
; TYPE: DNA
; ORGANISM: Virus
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (320)...(9352)
US-09-388-874-1

  Query Match 2.7%; Score 56; DB 3; Length 9379;
  Best Local Similarity 100.0%; Pred. No. 1e-18;
  Matches 56; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 3686 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 3741

RESULT 39
US-09-916-359-1
; Sequence 1, Application US/09916359
; Patent No. 6538123
; GENERAL INFORMATION:
; APPLICANT: Veronique Barban
; TITLE OF INVENTION: VACCINE COMPOSITION FOR PREVENTING OR
; TITLE OF INVENTION: TREATING C HEPATITIS
; FILE REFERENCE: PMCF97-03A
; CURRENT APPLICATION NUMBER: US/09/916,359
; CURRENT FILING DATE: 2001-07-26
; PRIOR APPLICATION NUMBER: 09/388,874
; PRIOR FILING DATE: 1999-09-02
; PRIOR APPLICATION NUMBER: 97/02,887
; PRIOR FILING DATE: 1997-03-06
; NUMBER OF SEQ ID NOS: 2
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 1
; LENGTH: 9379
; TYPE: DNA
; ORGANISM: Virus
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (320)...(9352)
US-09-916-359-1

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  Query Match             2.7%;  Score 56;  DB 4;  Length 9379;
  Best Local Similarity   100.0%;  Pred. No. 1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       3686 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 3741


RESULT 40
US-07-910-760-9
; Sequence 9, Application US/07910760
; Patent No. 5683864
;  GENERAL INFORMATION:
;    APPLICANT:  Houghton, Michael
;    APPLICANT:  Choo, Qui-Lim
;    APPLICANT:  Kuo, George
;    TITLE OF INVENTION:  Combinations of Hepatitis C virus (HCV)
;    TITLE OF INVENTION:  Antigens for Use in Immunoassays for Anti-HCV Antibodies
;    NUMBER OF SEQUENCES:  12
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Chiron Corporation
;      STREET:  P.O. Box 8097  (Int. Prop. R-440)
;      CITY:  Emeryville
;      STATE:  CA
;      COUNTRY:  U.S.A.
;      ZIP:  94662-8097
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/910,760
;      FILING DATE:  07-JUL-1992
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Blackburn Esq., Robert P.
;      REGISTRATION NUMBER:  30,447
;      REFERENCE/DOCKET NUMBER:  0101.002
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (510) 601-2702
;      TELEFAX:  (510) 655-3542
;  INFORMATION FOR SEQ ID NO:  9:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  9401 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  double
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  342..9374
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  366
;      OTHER INFORMATION:  /note= "This amino acid position
;      OTHER INFORMATION:  can also be Arg."
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  372
;      OTHER INFORMATION:  /note= "This amino acid position
;      OTHER INFORMATION:  can also be Thr."
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  867
;      OTHER INFORMATION:  /note= "This amino acid position
;      OTHER INFORMATION:  can also be Thr."
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  1341
;      OTHER INFORMATION:  /note= "This amino acid position
;      OTHER INFORMATION:  can also be Val."
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  2148
;      OTHER INFORMATION:  /note= "This amino acid position
;      OTHER INFORMATION:  can also be Ile."
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  2883
;      OTHER INFORMATION:  /note= "This amino acid position
;      OTHER INFORMATION:  can also be Asn."
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  3681
;      OTHER INFORMATION:  /note= "This amino acid position
;      OTHER INFORMATION:  can also be Ser."
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  3690
;      OTHER INFORMATION:  /note= "This amino acid position
;      OTHER INFORMATION:  can also be Thr."
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  4167
;      OTHER INFORMATION:  /note= "This amino acid position
;      OTHER INFORMATION:  can also be Leu."
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  4323
;      OTHER INFORMATION:  /note= "This amino acid position
;      OTHER INFORMATION:  can also be Val."
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  4701
;      OTHER INFORMATION:  /note= "This amino acid position
;      OTHER INFORMATION:  can also be Tyr."
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  4752
;      OTHER INFORMATION:  /note= "This amino acid position
;      OTHER INFORMATION:  can also be Ser."
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  5970
;      OTHER INFORMATION:  /note= "This amino acid position
;      OTHER INFORMATION:  can also be Gly."
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  6183
;      OTHER INFORMATION:  /note= "This amino acid position
;      OTHER INFORMATION:  can also be His."
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  6186
;      OTHER INFORMATION:  /note= "This amino acid position
;      OTHER INFORMATION:  can also be Cys."
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  6402
;      OTHER INFORMATION:  /note= "This amino acid position
;      OTHER INFORMATION:  can also be Val."
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  7386
;      OTHER INFORMATION:  /note= "This amino acid position
;      OTHER INFORMATION:  can also be Ser."
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  7494
;      OTHER INFORMATION:  /note= "This amino acid position
;      OTHER INFORMATION:  can also be Phe."
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  7497
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; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Ala."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 7845
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Phe."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 8409
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Gly."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 9102
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also by Gly."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 9327
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Pro."
US-07-910-760-9

Query Match 2.7%; Score 56; DB 1; Length 9401;
Best Local Similarity 100.0%; Pred. No. 1e-18;
Matches 56; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 3708 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 3763

RESULT 41
US-08-440-519-9
; Sequence 9, Application US/08440519
; Patent No. 5712087
; GENERAL INFORMATION:
; APPLICANT: Houghton, Michael
; APPLICANT: Choo, Qui-Lim
; APPLICANT: Kuo, George
; TITLE OF INVENTION: Combinations of Hepatitis C virus (HCV)
; TITLE OF INVENTION: Antigens for Use in Immunoassays for Anti-HCV Antibodies
; NUMBER OF SEQUENCES: 12
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Chiron Corporation
; STREET: P.O. Box 8097 (Int. Prop. R-440)
; CITY: Emeryville
; STATE: CA
; COUNTRY: U.S.A.
; ZIP: 94662-8097
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/440,519
; FILING DATE: 12-MAY-1995
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/910,760
; FILING DATE: 07-JUL-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: Blackburn Esq., Robert P.
; REGISTRATION NUMBER: 30,447
; REFERENCE/DOCKET NUMBER: 0101.002
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (510) 601-2702
; TELEFAX: (510) 655-3542
; INFORMATION FOR SEQ ID NO: 9:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 9401 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: double
; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 342..9374
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 366
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Arg."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 372
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Thr."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 867
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Thr."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 1341
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Val."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 2148
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Ile."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 2883
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Asn."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 3681
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Ser."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 3690
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Thr."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 4167
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Leu."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 4323
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Val."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 4701
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Tyr."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 4752
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Ser."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 5970
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Gly."
; FEATURE:

; NAME/KEY: misc_feature
; LOCATION: 6183
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be His."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 6186
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Cys."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 6402
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Val."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 7386
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Ser."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 7494
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Phe."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 7497
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Ala."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 7845
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Phe."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 8409
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Gly."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 9102
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also by Gly."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 9327
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Pro."
US-08-440-519-9

Query Match 2.7%; Score 56; DB 1; Length 9401;
Best Local Similarity 100.0%; Pred. No. 1e-18;
Matches 56; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 3708 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 3763

RESULT 42
US-08-440-549-9
; Sequence 9, Application US/08440549
; Patent No. 6312889
; GENERAL INFORMATION:
; APPLICANT: Houghton, Michael
; APPLICANT: Choo, Qui-Lim
; APPLICANT: Kuo, George
; TITLE OF INVENTION: Combinations of Hepatitis C virus (HCV)
; TITLE OF INVENTION: Antigens for Use in Immunoassays for Anti-HCV Antibodies
; NUMBER OF SEQUENCES: 12
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Chiron Corporation
; STREET: P.O. Box 8097 (Int. Prop. R-440)
; CITY: Emeryville
; STATE: CA
; COUNTRY: U.S.A.
; ZIP: 94662-8097
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/440,549
; FILING DATE: 12-MAY-1995
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/910,760
; FILING DATE: 07-JUL-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: Blackburn Esq., Robert P.
; REGISTRATION NUMBER: 30,447
; REFERENCE/DOCKET NUMBER: 0101.002
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (510) 601-2702
; TELEFAX: (510) 655-3542
; INFORMATION FOR SEQ ID NO: 9:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 9401 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: double
; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 342..9374
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 366
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Arg."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 372
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Thr."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 867
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Thr."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 1341
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Val."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 2148
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Ile."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 2883
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Asn."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 3681
; OTHER INFORMATION: /note= "This amino acid position
; OTHER INFORMATION: can also be Ser."
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 3690
; OTHER INFORMATION: /note= "This amino acid position

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;       OTHER INFORMATION:  can also be Thr."
;     FEATURE:
;       NAME/KEY:  misc_feature
;       LOCATION:  4167
;       OTHER INFORMATION:  /note= "This amino acid position
;       OTHER INFORMATION:  can also be Leu."
;     FEATURE:
;       NAME/KEY:  misc_feature
;       LOCATION:  4323
;       OTHER INFORMATION:  /note= "This amino acid position
;       OTHER INFORMATION:  can also be Val."
;     FEATURE:
;       NAME/KEY:  misc_feature
;       LOCATION:  4701
;       OTHER INFORMATION:  /note= "This amino acid position
;       OTHER INFORMATION:  can also be Tyr."
;     FEATURE:
;       NAME/KEY:  misc_feature
;       LOCATION:  4752
;       OTHER INFORMATION:  /note= "This amino acid position
;       OTHER INFORMATION:  can also be Ser."
;     FEATURE:
;       NAME/KEY:  misc_feature
;       LOCATION:  5970
;       OTHER INFORMATION:  /note= "This amino acid position
;       OTHER INFORMATION:  can also be Gly."
;     FEATURE:
;       NAME/KEY:  misc_feature
;       LOCATION:  6183
;       OTHER INFORMATION:  /note= "This amino acid position
;       OTHER INFORMATION:  can also be His."
;     FEATURE:
;       NAME/KEY:  misc_feature
;       LOCATION:  6186
;       OTHER INFORMATION:  /note= "This amino acid position
;       OTHER INFORMATION:  can also be Cys."
;     FEATURE:
;       NAME/KEY:  misc_feature
;       LOCATION:  6402
;       OTHER INFORMATION:  /note= "This amino acid position
;       OTHER INFORMATION:  can also be Val."
;     FEATURE:
;       NAME/KEY:  misc_feature
;       LOCATION:  7386
;       OTHER INFORMATION:  /note= "This amino acid position
;       OTHER INFORMATION:  can also be Ser."
;     FEATURE:
;       NAME/KEY:  misc_feature
;       LOCATION:  7494
;       OTHER INFORMATION:  /note= "This amino acid position
;       OTHER INFORMATION:  can also be Phe."
;     FEATURE:
;       NAME/KEY:  misc_feature
;       LOCATION:  7497
;       OTHER INFORMATION:  /note= "This amino acid position
;       OTHER INFORMATION:  can also be Ala."
;     FEATURE:
;       NAME/KEY:  misc_feature
;       LOCATION:  7845
;       OTHER INFORMATION:  /note= "This amino acid position
;       OTHER INFORMATION:  can also be Phe."
;     FEATURE:
;       NAME/KEY:  misc_feature
;       LOCATION:  8409
;       OTHER INFORMATION:  /note= "This amino acid position
;       OTHER INFORMATION:  can also be Gly."
;     FEATURE:
;       NAME/KEY:  misc_feature
;       LOCATION:  9102
;       OTHER INFORMATION:  /note= "This amino acid position
;       OTHER INFORMATION:  can also by Gly."
;     FEATURE:
;       NAME/KEY:  misc_feature
;       LOCATION:  9327
;       OTHER INFORMATION:  /note= "This amino acid position
;       OTHER INFORMATION:  can also be Pro."
US-08-440-549-9

  Query Match             2.7%;  Score 56;  DB 4;  Length 9401;
  Best Local Similarity   100.0%;  Pred. No. 1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       3708 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 3763


RESULT 43
US-08-823-895A-25
; Sequence 25, Application US/08823895A
; Patent No. 6433159
;  GENERAL INFORMATION:
;    APPLICANT:  Kevin P. Anderson
;    TITLE OF INVENTION:  Compositions And Methods For
;    TITLE OF INVENTION:  Treatment Of Hepatitis C Virus-Associated Diseases
;    NUMBER OF SEQUENCES:  27
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Jane Massey Licata, Esq.
;      STREET:  66 E. Main Street
;      CITY:  Marlton
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  08053
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
;      COMPUTER:  IBM 486
;      OPERATING SYSTEM:  WINDOWS FOR WORKGROUPS
;      SOFTWARE:  WORDPERFECT 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/823,895A
;      FILING DATE:  March 17, 1997
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/453,085
;      FILING DATE:  May 30, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/945,289
;      FILING DATE:  September 10, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Jane Massey Licata
;      REGISTRATION NUMBER:  32,257
;      REFERENCE/DOCKET NUMBER:  ISPH-0203
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (609) 779-2400
;      TELEFAX:  (609) 810-1454
;  INFORMATION FOR SEQ ID NO:  25:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  9401
;      TYPE:  Nucleic
;      STRANDEDNESS:  Single
;      TOPOLOGY:  Linear
;    ANTI-SENSE:  NO
US-08-823-895A-25

  Query Match             2.7%;  Score 56;  DB 4;  Length 94
  Best Local Similarity   100.0%;  Pred. No. 1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indel

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCC
              ||||||||||||||||||||||||||||||||||||||||||||||
Db       3708 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCC


RESULT 44
PCT-US91-02225-9
; Sequence 9, Application PC/TUS9102225
```

```
;  GENERAL INFORMATION:
;    APPLICANT:  HOUGHTON, MICHAEL
;    APPLICANT:  CHOO, QUI-LIM
;    APPLICANT:  KUO, GEORGE
;    TITLE OF INVENTION:  COMBINATIONS OF HEPATITIS C VIRUS
;    TITLE OF INVENTION:
;    TITLE OF INVENTION:  ANTIBODIES
;    NUMBER OF SEQUENCES:  10
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Morrison & Foerster
;      STREET:  545 Middlefield Road, Suite 200
;      CITY:  Menlo Park
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94025
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US91/02225
;      FILING DATE:  19910329
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  CIOTTI, THOMAS E.
;      REGISTRATION NUMBER:  21,013
;      REFERENCE/DOCKET NUMBER:  2300-0101.44
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 327-7250
;      TELEFAX:  (415) 327-2951
;      TELEX:  706141
;  INFORMATION FOR SEQ ID NO:  9:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  9401 base pairs
;      TYPE:  NUCLEIC ACID
;      STRANDEDNESS:  unknown
;      TOPOLOGY:  unknown
;    MOLECULE TYPE:  DNA (genomic)
PCT-US91-02225-9

  Query Match             2.7%;  Score 56;  DB 5;  Length 9401;
  Best Local Similarity   100.0%;  Pred. No. 1e-18;
  Matches   56;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        292 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 347
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       3708 TGCACTTGCGGCTCCTCGGACCTTTACCTGGTCACGAGGCACGCCGATGTCATTCC 3763


RESULT 45
US-08-823-895A-26
; Sequence 26, Application US/08823895A
; Patent No. 6433159
;  GENERAL INFORMATION:
;    APPLICANT:  Kevin P. Anderson
;    TITLE OF INVENTION:  Compositions And Methods For
;    TITLE OF INVENTION:  Treatment Of Hepatitis C Virus-Associated Diseases
;    NUMBER OF SEQUENCES:  27
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Jane Massey Licata, Esq.
;      STREET:  66 E. Main Street
;      CITY:  Marlton
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  08053
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
;      COMPUTER:  IBM 486
;      OPERATING SYSTEM:  WINDOWS FOR WORKGROUPS
;      SOFTWARE:  WORDPERFECT 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/823,895A
;      FILING DATE:  March 17, 1997
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/453,085
;      FILING DATE:  May 30, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/945,289
;      FILING DATE:  September 10, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Jane Massey Licata
;      REGISTRATION NUMBER:  32,257
;      REFERENCE/DOCKET NUMBER:  ISPH-0203
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (609) 779-2400
;      TELEFAX:  (609) 810-1454
;  INFORMATION FOR SEQ ID NO:  26:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  9416
;      TYPE:  Nucleic
;      STRANDEDNESS:  Single
;      TOPOLOGY:  Linear
;    ANTI-SENSE:  NO
US-08-823-895A-26

  Query Match             2.6%;  Score 53;  DB 4;  Length 9416;
  Best Local Similarity   100.0%;  Pred. No. 3.5e-17;
  Matches   53;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        598 GTGGCCCACCTGCATGCTCCCACCGGCAGCGGTAAGAGCACCAAGGTCCCGGC 650
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       4014 GTGGCCCACCTGCATGCTCCCACCGGCAGCGGTAAGAGCACCAAGGTCCCGGC 4066


RESULT 46
US-10-104-966-13
; Sequence 13, Application US/10104966
; Patent No. 6680059
; GENERAL INFORMATION:
;  APPLICANT: Matti Sallberg
;  APPLICANT: Catharina Hultgren
;  TITLE OF INVENTION: VACCINES CONTAINING RIBAVIRIN AND
;  TITLE OF INVENTION:  METHODS OF USE THEREOF
;  FILE REFERENCE: TRIPEP.23AUSC1
;  CURRENT APPLICATION NUMBER: US/10/104,966
;  CURRENT FILING DATE:  2002-03-22
;  PRIOR APPLICATION NUMBER: 09/705,547
;  PRIOR FILING DATE: 2000-11-03
;  PRIOR APPLICATION NUMBER: 60/229,175
;  PRIOR FILING DATE: 2000-08-29
;  NUMBER OF SEQ ID NOS: 15
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 13
;   LENGTH: 9416
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Hepatitis C virus sequence
US-10-104-966-13

  Query Match             2.6%;  Score 53;  DB 4;  Length 9416;
  Best Local Similarity   100.0%;  Pred. No. 3.5e-17;
  Matches   53;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        598 GTGGCCCACCTGCATGCTCCCACCGGCAGCGGTAAGAGCACCAAGGTCCCGGC 650
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Db       4014 GTGGCCCACCTGCATGCTCCCACCGGCAGCGGTAAGAGCACCAAGGTCCCGGC 4066


RESULT 47
US-09-014-416-2
; Sequence 2, Application US/09014416
; Patent No. 6153421
; GENERAL INFORMATION:
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;  APPLICANT: Yanagi, Masayuki
;  APPLICANT: Bukh, Jens
;  APPLICANT: Emerson, Susanne U.
;  APPLICANT: Purcell, Robert H.
;  TITLE OF INVENTION: CLONED GENOMES OF INFECTIOUS HEPATITIS C VIRUSES AND
;  TITLE OF INVENTION: USES THEREOF
;  FILE REFERENCE: 20264276
;  CURRENT APPLICATION NUMBER: US/09/014,416
;  CURRENT FILING DATE: 1998-01-27
;  EARLIER APPLICATION NUMBER: US 60/053,062
;  EARLIER FILING DATE: 1997-07-18
;  NUMBER OF SEQ ID NOS: 65
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
;    LENGTH: 9599
;    TYPE: DNA
;    ORGANISM: Hepatitis C virus
US-09-014-416-2

  Query Match             2.6%;  Score 53;  DB 3;  Length 9599;
  Best Local Similarity   100.0%;  Pred. No. 3.5e-17;
  Matches   53;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        598 GTGGCCCACCTGCATGCTCCCACCGGCAGCGGTAAGAGCACCAAGGTCCCGGC 650
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Db       4014 GTGGCCCACCTGCATGCTCCCACCGGCAGCGGTAAGAGCACCAAGGTCCCGGC 4066


RESULT 48
US-09-014-416-6
; Sequence 6, Application US/09014416
; Patent No. 6153421
; GENERAL INFORMATION:
;  APPLICANT: Yanagi, Masayuki
;  APPLICANT: Bukh, Jens
;  APPLICANT: Emerson, Susanne U.
;  APPLICANT: Purcell, Robert H.
;  TITLE OF INVENTION: CLONED GENOMES OF INFECTIOUS HEPATITIS C VIRUSES AND
;  TITLE OF INVENTION: USES THEREOF
;  FILE REFERENCE: 20264276
;  CURRENT APPLICATION NUMBER: US/09/014,416
;  CURRENT FILING DATE: 1998-01-27
;  EARLIER APPLICATION NUMBER: US 60/053,062
;  EARLIER FILING DATE: 1997-07-18
;  NUMBER OF SEQ ID NOS: 65
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 6
;    LENGTH: 9599
;    TYPE: DNA
;    ORGANISM: Hepatitis C virus
US-09-014-416-6

  Query Match             2.6%;  Score 53;  DB 3;  Length 9599;
  Best Local Similarity   100.0%;  Pred. No. 3.5e-17;
  Matches   53;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        598 GTGGCCCACCTGCATGCTCCCACCGGCAGCGGTAAGAGCACCAAGGTCCCGGC 650
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Db       4014 GTGGCCCACCTGCATGCTCCCACCGGCAGCGGTAAGAGCACCAAGGTCCCGGC 4066


RESULT 49
US-08-811-566-1
; Sequence 1, Application US/08811566
; Patent No. 6127116
;  GENERAL INFORMATION:
;    APPLICANT:  Rice, Charles  et al.
;    TITLE OF INVENTION:  FUNCTIONAL DNA CLONE FOR HEPATITIS C
;    TITLE OF INVENTION:  VIRUS (HCV) AND USES THEREOF
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  David A. Jackson, Esq.
;      STREET:  411 Hackensack Ave, Continental Plaza, 4th
;      STREET:  Floor
;      CITY:  Hackensack
;      STATE:  New Jersey
;      COUNTRY:  USA
;      ZIP:  07601
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/811,566
;      FILING DATE:  03-MAR-1997
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Jackson Esq., David A.
;      REGISTRATION NUMBER:  26,742
;      REFERENCE/DOCKET NUMBER:  1113-1-006
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  201-487-5800
;      TELEFAX:  201-343-1684
;  INFORMATION FOR SEQ ID NO:  1:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  9646 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  double
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  NO
US-08-811-566-1

  Query Match             2.6%;  Score 53;  DB 3;  Length 9646;
  Best Local Similarity   100.0%;  Pred. No. 3.5e-17;
  Matches   53;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        598 GTGGCCCACCTGCATGCTCCCACCGGCAGCGGTAAGAGCACCAAGGTCCCGGC 650
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Db       4014 GTGGCCCACCTGCATGCTCCCACCGGCAGCGGTAAGAGCACCAAGGTCCCGGC 4066


RESULT 50
US-09-034-756-1
; Sequence 1, Application US/09034756
; Patent No. 6392028
;  GENERAL INFORMATION:
;       APPLICANT: RICE, CHARLES  et al.
;       TITLE OF INVENTION: FUNCTIONAL DNA CLONE FOR HEPATITIS C
;                           VIRUS (HCV) AND USES THEREOF
;       NUMBER OF SEQUENCES: 21
;       CORRESPONDENCE ADDRESS:
;            ADDRESSEE: HOWELL & HAFERKAMP, L.C.
;            STREET: 7733 FORSYTH BLVD., SUITE 1400
;            CITY: ST. LOUIS
;            STATE: MO
;            COUNTRY: USA
;            ZIP: 63105
;       COMPUTER READABLE FORM:
;            MEDIUM TYPE: Floppy disk
;            COMPUTER: IBM PC compatible
;            OPERATING SYSTEM: PC-DOS/MS-DOS
;            SOFTWARE: PatentIn Release #1.0, Version #1.30
;       CURRENT APPLICATION DATA:
;            APPLICATION NUMBER: US/09/034,756
;            FILING DATE: 04-May-1998
;            CLASSIFICATION: <Unknown>
;       ATTORNEY/AGENT INFORMATION:
;            NAME: HOLLAND, DONALD R.
;            REGISTRATION NUMBER: 35,197
;            REFERENCE/DOCKET NUMBER: 6029-4831
;       TELECOMMUNICATION INFORMATION:
;            TELEPHONE: 314-727-5188
;            TELEFAX: 314-727-6092
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; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 9646 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: double
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; SEQUENCE DESCRIPTION: SEQ ID NO: 1:
US-09-034-756-1

Query Match 2.6%; Score 53; DB 4; Length 9646;
Best Local Similarity 100.0%; Pred. No. 3.5e-17;
Matches 53; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db       4014 GTGGCCCACCTGCATGCTCCCACCGGCAGCGGTAAGAGCACCAAGGTCCCGGC 4066
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Search completed: August 19, 2004, 10:24:16
Job time : 177 secs

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: August 19, 2004, 04:53:05 ; Search time 4815 Seconds
(without alignments)
12782.130 Million cell updates/sec

Title: US-09-930-591-1
Perfect score: 2061
Sequence: 1 atggcgcctatcacggccta.....atgaaatggaagagtgctga 2061

Scoring table: OLIGO_NUC
Gapop 60.0 , Gapext 60.0

Searched: 27513289 seqs, 14931090276 residues

Word size : 35

Total number of hits satisfying chosen parameters: 0

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Listing first 1000 summaries

Database : EST:*
1: em_estba:*
2: em_esthum:*
3: em_estin:*
4: em_estmu:*
5: em_estov:*
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7: em_estro:*
8: em_htc:*
9: gb_est1:*
10: gb_est2:*
11: gb_htc:*
12: gb_est3:*
13: gb_est4:*
14: gb_est5:*
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23: em_gss_mus:*
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25: em_gss_rod:*
26: em_gss_phg:*
27: em_gss_vrl:*
28: gb_gss1:*
29: gb_gss2:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description

No matches found

Search completed: August 19, 2004, 10:14:09
Job time : 4815 secs